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SPECIAL ARTICLES.

THE CASE OF THE PRESIDENT, CONTINUED.

ON Thursday evening of last week, after the MEDICAL NEWS for the issue of the 14th inst. had gone to press, rumors began to be rife of a change in the President's condition. The symptoms of failing circulation grew urgent and persisted in spite of vigorous stimulation. It soon became evident that a fatal termination of the case, which had seemed so hopeful up to that date, was only a question of time and that the end was not far off. Science could do little more than delay for a few hours the inevitable.

Cause of Death.—The question that interested all citizens and especially the medical profession of this country and, it may well be said, of the world was, What was the cause of the fatal issue? The autopsy was expected to give a clear answer and remove the dark mystery which had baffled the diagnostic skill of the remarkable assembly of medical and surgical experts whose assistance had been sought. The official abstract from the autopsy findings showed very clearly that death was inevitable from the beginning. The wounded internal tissues, instead of reacting so as to produce union, became gangrenous. The declaration in the matter was most explicit. The signed report reads as follows:

"The bullet which struck over the breastbone did not pass through the skin and did little harm.

"The other bullet passed through both walls of the stomach near its lower border. Both holes were found to be perfectly closed by the stitches, but the tissue around each hole had become gangrenous. After passing through the stomach the bullet passed into the back wall of the abdomen, hitting and tearing the upper end of the kidney. This portion of the bullet track was also gangrenous, the gangrene involving the pancreas. The bullet has not yet been found. There was no sign of peritonitis or disease of other organs. The heart walls were very thin.

"There was no evidence of any attempt at repair on the part of Nature and death resulted from the gangrene, which affected the stomach around the bullet wounds, as well as the tissues around the further course of the bullet. Death was unavoidable by any surgical or medical treatment and was the direct result of the bullet wound."

This indicated that death was due to the gangrenous process, but gave very little clue to the cause of the gangrene. Internal tissues injured by bullet wounds do not become gangrenous unless there is some circumstance in addition to the mere passage of a bullet. What this accessory factor could have been has occupied general attention during the week.

Was the Bullet Poisoned?—It was suggested at the autopsy by a well-known medical authority that the bullet was poisoned. Chemical and bacteriological examinations of the cartridges left in the revolver will have to be made to determine definitely this point. In the meantime certain considerations seem to render such an hypothesis unlikely. The poison could scarcely be a chemical irritant, since a 32-caliber bullet could not carry on its outer surface enough of any chemical that is ordinarily known even to medical men to produce such a fulminant death of tissues. As will be remembered scarcely more than one-half the surface of the bullet in a cartridge is exposed for coating with foreign material and any such material would be removed in a great degree during the course of the bullet through the revolver barrel, the clothing and external tissues of the victim. There are popular traditions of virulent poisons that act in minutest quantities, but medicine knows of none that would act as this one is said to have done.

Was the Poison Used a Bacterial Agent and not a Chemical Compound?—this is more possible, but there is no known culture of bacteria that will produce gangrene locally without giving signs of a general septic condition. It has been suggested that if the bullet were dipped previous to insertion in the revolver in putrid meat, gangrene would result wherever it came in contact with the tissues. This would not produce local death of tissue without provoking a reaction. Such a procedure might cause sepsis, but not gangrene, unless the vitality of the parts wounded had been very much reduced. Gangrene is not putrefaction, which is an active biological process due to the presence of living germs, but is death of the tissues involved.

Wound of the Pancreas.—It has been suggested that the President's death was directly due to a wound of the pancreas. The secretion of the pancreas is supposed to have escaped and followed the track of the bullet causing by its presence the gangrene or local death of the tissues wherever it flowed over the wounded part. Against this theory there are a good many objections. The first and most important one is that the track of the bullet seems to have been such that the pancreas was not wounded. The bullet passed through the walls of the stomach near its lower border and so its course would carry it several inches below a normally situated pancreas. Besides this, supposing there was a wound of that organ, pancreatic secretion might

easily have reached the wound in the posterior wall of the stomach, but it is hard to understand how it could have found its way to the anterior gastric wall, since the surgeons declare that the President's stomach was found nearly half-full of food at the time of the operation. A wound of the pancreas, supposing a prolapse of that organ to account for such an accident, would have taken place near its tail where the pancreatic ducts are small and there would be very limited discharge of its secretion.

With regard to the effect of the pancreatic juice, while it produces necrosis of fatty tissue, it does not produce gangrene. The characteristic appearance of the peritoneum where a discharge of pancreatic juice has taken place is well known to those who have seen many autopsies and would have been recognized at once by the experienced pathologists who made the autopsy.

It is true that we are in the dark to a great extent with regard to all the effects of injuries to the pancreas. It is now nearly twenty-five years since Senn, of Chicago, published his work on the surgery of the pancreas of animals, which formed the basis of all medical knowledge on the subject throughout the world, and very little progress has been made in the matter since that time. The surgery of the pancreas was one of the questions for special discussion at the last International Medical Congress and the conclusions reached at that time show how lacking we are in definite knowledge notwithstanding the recent great advances in abdominal surgery.

This much is certain, however, that wounds of the pancreas are by no means necessarily fatal. The escape of pancreatic fluid produces characteristic foci of fat necrosis, but does not produce the lowering of vital resistance which would lead to local death of all tissues with which it happened to come in contact. A number of recoveries from wounds and operations on the pancreas are reported and gangrene is not one of the complications or sequelæ usually anticipated.

Possible Factors in the Result.—There remain certain other organic injuries that may have had their effect in producing the lowered vitality of tissue which led to localized gangrene and consequently to the fatal termination. An extremely important organ, well known in recent years by reason of certain fatalities that have been attributed to it after blows in the region of the stomach, is the solar plexus. The disturbance of the President's pulse during the first few days after the operation was attributed by one of the most prominent surgeons in charge of the case to irritation of this extremely sensitive organ, the abdominal brain as it has been not inaptly called. Unfortunately our knowledge of the functions of the various parts of the nervous system and especially of the abdominal sympathetic nervous system is not sufficient to enable us to say with any degree of assurance what would be the effect of direct injury or serious irritation of this organ. The manipulations necessary for the suturing of the wounds in the stomach had to be carried out in the immediate neighborhood of this delicate organ. This is true, however, in all wounds of the stomach and usually there are no serious consequences. It is not impossible that the irritation produced by the passage of the bullet itself and the subsequent operative procedures should have produced serious sympathetic nervous disturbance. The smaller blood-vessels are especially under the control of the sympathetic. This nervous irritation might have produced the interference with the circulation that led to the local death of tissue. But the direction of the bullet in its course from front to back was away from rather than toward the median lines where it would have involved the solar plexus.

Another consideration that seems worth while discussing is the possible effect of a wound of the suprarenal capsule. The bullet, after its passage through the stomach, tore the upper part of the left kidney and injured the left suprarenal body. A few years ago this would have been considered of no special significance. Now we know that the secretion of the suprarenal capsule is an active agent in producing localized contraction of blood-vessels and consequent diminution of the circulation in tissues. Whether this could have had any effect in lowering the vitality of the wounded tissues and so inducing gangrene is doubtful, but must not be left entirely out of consideration.

There remains the question of the President's individual resistive vitality. There are persons whose reactive power is extremely limited. Diabetics, for instance, are prone to suffer from gangrene after very slight injuries. The late President did not suffer from diabetes, but for some time an abnormal condition of his kidneys has at least been suspected. His age was a factor against his prompt recovery, but should not have made it impossible. Constitutional lack of reactive vitality seems the most important element in the unfortunate and unexpected fatal issue.

It is clear that no human skill could have saved the President's life and that everything that modern scientific medicine could possibly suggest was done for him. The surgeons have been all too freely blamed for their optimistic bulletins. Their wishes may have obscured their better judgments. It is always easy to be wise after the event. At noon on Tuesday, September 9th, the President's pulse was 104 and his temperature below 100° F. This certainly presented a most encouraging condition of affairs after the shock to which the patient had been subjected. There was every reason to think that danger from infection was past. The fatal issue emphasizes the necessity that always exists for most careful prognosis whenever patients are much advanced beyond middle life. The present case, however, contained elements so entirely unusual that no human foresight or even the greatest possible caution could have prevented the sad disappointment that ensued.

ORIGINAL ARTICLES.

DISAPPEARING TUMORS.[1]

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SCATTERED throughout literature are more or less vague descriptions of tumors supposed to be true neoplasms which, under observation, apparently disappeared and did not recur. In the majority of cases this disappearance was spontaneous or resulted from such slight operative procedures as exploratory incision or puncture. In a few cases it followed operation upon other organs or occurred as the result of a treatment wholly palliative in nature. The tumors described in these cases were not of the nature of "phantom tumors," but were new growths of tissue evident to sight and touch and accessible to surgical examination. If we exclude all of the so-called "phantom" or "apparent" tumors which have been reported under the head of "vanishing" or disappearing" tumors, there is left a fairly large class of cases presenting actual new growths of tissue which under certain conditions either temporarily or permanently disappeared. Occurrences of this nature have most probably come within the experience of nearly every surgeon of large practice, and, while references to such cases are not infrequently met with, no adequate attention has been paid to them.

An analysis of the reported cases of such disappearing tumors shows but few instances in which the pathological nature of the growth was ascertained by microscopical examination, and the clinical data are so confused and unreliable in the majority of cases that they possess but little scientific value. This is true also of some of the cases in which the growth was examined microscopically, the descriptions throwing doubt upon the correctness of the diagnosis. This is especially true of the older cases in which the diagnosis was made at a time when pathological classifications were not based upon such close lines of differential diagnosis as those of to-day. Eliminating such doubtful cases, as well as all cases of phantom tumor, fecal impaction, floating kidney or liver, enlarged liver or spleen, distended urinary and gall-bladder, tuberculous and syphilitic conditions, and also eliminating all cases in which disappearance could possibly be traced to medication (arsenic, cancroin of Adamkiewicz, Coley's toxins, etc.), or in which it could be traced to definite infections, destructive processes of the growth itself, or to intercurrent affections influencing the growth, the reported cases of disappearing tumors fall into three definite classes, viz., benign and malignant neoplasms and inflammatory growths.

Of the benign tumors most frequently undergoing retrograde changes leading to spontaneous disappearance are the different forms of hemangioma and lymphangioma. Power and Johnson have reported cases of the complete disappearance of cystic lymphangiomata of the neck in children. Cavernous and telangiectatic angiomata not infrequently become completely obliterated through thrombosis and subsequent organization of their blood-spaces, the contraction of the newly formed tissue leading ultimately to insignificant scars. Evidences of such spontaneous healing are of frequent occurrence in the cavernous angiomata of the liver. The smaller vascular growths of the skin, pigmented and non-pigmented moles also frequently undergo spontaneous resolution.

Lipomata in rare cases may spontaneously disappear without known cause. Within the past year such a case has come under Spitzley's observation. Thirteen months ago, he saw a boy thirteen years old with a tumor in the right supraclavicular region. The tumor had been of slow growth, having been observed six or seven months before as a small nodule, gradually increasing in size until it was as large as a lemon, though much flattened. It presented all the clinical features of a lipoma, being smooth, soft, painless, situated apparently in subcutaneous tissue and freely movable, without involvement of the skin or deeper structures. At that time operation was advised, but not urged, the possibility but improbability of its spontaneous disappearance being suggested. The parents decided to wait for a time to see whether it would increase to a still greater size. Nothing was heard concerning the case for over a year, when the boy was brought for examination for another trouble; and then in spite of most careful inspection and palpation, no trace of the tumor could be found. It is of interest to note that the boy who, at the time he was first seen was stout, even fat, had during the year lost ten or fifteen pounds in weight.

Nasal polypi may ulcerate and disappear, or through twisting and necrosis of their pedicles remove themselves. Small papillomatous fibromata of the skin not infrequently disappear. Pedunculated fibromata or myofibromata of the uterus may become detached through the tearing or necrosis of their attachments, or, as a result of disturbed blood-supply following such twisting, the entire tumor may become necrotic and be expelled or absorbed. Retrograde changes are of very frequent occurrence in myofibromata; either myxomatous or fatty degeneration, simple necrosis or liquefaction necrosis of the entire tumor may take place, leading to its ultimate complete disappearance. Gibert and A. Martin report many cases of spontaneous regression of uterine fibroid and myofibromata. Chondromata may rarely undergo fatty or myxomatous degeneration and completely disappear. Likewise exostoses may be re-absorbed.

Of the benign epithelial tumors adenomata or glandular hyperplasias of the prostate have disappeared or become smaller after removal of a

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testicle or section of the vas deferens; fibro-adenomata and cystadenomata of the mammary gland have been similarly affected after ovariotomy. Benign mammary tumors have also disappeared under the influence of pregnancy and lactation. Bryant reports two cases of vanishing mammary cysts. Spitzley has at present under observation a woman forty-seven years of age, who has borne no child for fifteen years, but who on the contrary has shown no sign of climacteric phenomena, in whom during a period of eighteen months there have developed five separate and distinct breast tumors, three in one breast and two in the other. The smaller one was the size of a hazel nut and the larger the size of a butter nut. They were presumably cysts although two of them were so hard that it seemed unlikely that they contained fluid. Unfortunately, through fear, the patient would not allow any kind of surgical interference, not even the introduction of an exploring needle, so that Spitzley is unable to state positively their real nature. The important point, however, is that without medication or manipulation of any kind, each of the tumors disappeared, none of them remaining longer than three months.

Cases of spontaneous resolution of malignant tumors are of much more rare occurrence. The well-known tendency of all rapidly growing malignant tumors to undergo retrograde change rarely reaches a point where it equals or exceeds their proliferative activity. Therefore, while it might be said that all or the majority of the malignant tumors show a tendency to self-limitation of growth through retrogressive metamorphoses, this tendency is but rarely exerted to a practical degree, the peripheral proliferation always surpassing the central death, so that the patient affected dies before the processes of tumor destruction equal or exceed those of proliferation and spread. In a few cases, however, the retrograde processes with subsequent formation of granulation tissue are much more actively manifest, so that actual healing of tumor nodules may take place. Warthin has reported a case of primary polymorphous-cell sarcoma of the nose with universal metastases in which many of the secondaries showed a partial or complete healing, having been replaced by scar tissue. All stages of this process could be traced in different nodules in various portions of the body. The same observer has seen very remarkable evidences of healing in the lung-metastases of a primary sarcoma of the vertebræ. Power, Walsham, and Baker report cases of healing of tumors diagnosed as sarcomata. Baker's case (recurrent tumor of scalp following injury) gave a microscopical appearance of a fibro-sarcoma, and the growth was designated by him as a "withering sarcoma." The tendency of the growths in mycosis fungoides (general sarcomatosis of the skin) to spontaneously disappear forms one of the most striking features of that disease. This disappearance is explained by Orth to be due to a preponderance of cell-decay over cell-growth, the defect thus produced being filled in with scar-tissue. Cases of spontaneous disappearance of carcinomata are more rare than of tumors diagnosed as sarcomata. This is probably due to the fact that some of the tumors regarded as sarcomata were in reality granulation tissue growths; but may also be partly explained by the closer relation of some forms of sarcomata to normal connective tissue and the fact that this is conducive to the formation of scar-tissue.

In connection with this question of retrogressive changes going on in neoplasms, one must, of necessity, take into account those cases in which acute infectious processes supervene, involving the neoplasms themselves and destroying them. Such tumors can not in the true sense be called disappearing tumors any more properly than can those subjected to the action of the mixed toxins. M. Richardson, before the American Surgical Association in 1898 reported a case of destruction of a round-celled sarcoma by wound infection; and recently a case has been reported in which infection supervened in the wound of an operation attempted for the clearing out of a carcinomatous axilla (secondary to mammary carcinoma), but abandoned because of the extraordinary involvement of all tissues, and three and a half years later showed no evidence of remaining malignant disease, the infection having presumably destroyed all involved tissues. As mentioned above, however, such cases should not be considered in the light of disappearing tumors, but as shining examples of accident pointing the way to successful therapeusis.

Kaposi has reported instances of spontaneous cure of epitheliomata of the skin. Stoerck reports an epithelioma of the tonsil disappearing without interference, but recurring within a year. Senger claims to have seen certain tumors of the buccal mucous membrane having the microscopical appearance of carcinomata disappear after the removal of jagged and irritating teeth. Doubt upon the carcinomatous nature of these growths has, however, been raised. Freeman describes a case of apparent disappearance of epithelioma of the lip, with fatal development of secondaries in the submaxillary region two years later. Billroth and many others report instances, particularly in old women, of the spontaneous disappearance or decrease in size of scirrhous cancers of the mammæ. Recently Osler has reported two cases of spontaneous disappearance of secondary growths arising from primary mammary cancers. He quotes similar cases of Vulpian and Gould. Since the use of erysipelas toxins in the treatment of inoperable neoplasms a number of cases are reported in which great reduction in size followed injection of these toxins into the new growth. No well authenticated case of complete cure by such treatment has been reported, and it is probable that the only effect of such treatment is to cause a more rapid retrograde process whereby the size of the tumor becomes rapidly reduced.

Into the third class of disappearing tumors falls a large class of new-formations of tissue which

are not of the nature of neoplasms. They are found chiefly in the peritoneal cavity, omentum or retroperitoneal region. Though in many instances mistaken both on physical and surgical examination, and in a few instances on microscopical examination, for sarcomata, they are in all cases to be regarded as of inflammatory origin. They arise in almost every instance from a local peritonitis, whatever its cause, but are most frequently found in association with appendicitis and salpingitis. The physical characteristics of these tumors vary greatly. They may form large, small, round, nodular, flattened, movable, immovable, sensitive, or painless masses presenting in any portion of the abdomen or pelvis. The greater portion of these tumors is usually formed by the omentum which almost immediately attaches itself to the inflamed area. Granulation tissue is rapidly formed in large amounts and a tumor mass is formed which may be acute, disappearing ultimately; or chronic, forming a thickened mass of scar tissue which may or may not be adherent to other portions of the peritoneum. Such tumors may occasionally reach a large size from extensive formation of granulation tissue or from the presence of pus-cavities. Similar formations of granulation-tissue may be found retroperitoneally in cases of pancreatic or renal disease, and also in association with appendicitis. In the great majority of cases the omental tumor follows appendicitis or salpingitis. In this connection should be mentioned a class of tumors of great importance but to which little attention has been given. Chronic inflammatory swellings of the head of the pancreas in association with cholelithiasis are not of infrequent occurrence. A number of these cases have been reported in which there was such enlargement of the head of the pancreas found in operating for gall-stones that the condition was diagnosed as primary cancer of this organ, but total disappearance of the tumors took place within a year or two after the removal of the gallstones. This condition has been variously interpreted, but no adequate explanation has as yet been reached. It may exist without involvement of the common duct through obstruction by gall-stones.

Summing up the reported cases of the disappearance of tumors consisting of actual new growth of tissue, we find that such event is of too rare occurrence to justify delay in operative procedures. While a few benign tumors may spontaneously heal, even in these cases there are inconveniences, and in case of necrosis, actual dangers in permitting this process to take place. In the case of malignant tumors the instances of complete disappearance are so rare and in the majority of cases so doubtful that this event is to be regarded in the light of an interesting pathological phenomenon without practical clinical value. Only in the third class of disappearing tumors, the inflammatory growths, may operative measures be delayed or dispensed with entirely with reference to the possibility of spontaneous cure. In all cases, however, the microscopical nature of the growth should be ascertained when possible. Further, it is practically only in the case of abdominal and pelvic growths that growths of this nature are to be looked for. The following cases are most interesting examples of disappearing tumors of this class, and are of additional value for the reason that microscopical examination was made of the tumor in two of the cases, thereby affording satisfactory explanation of this clinical course. The first three came under our observation in the surgical clinic service of Dr. Nancrede of the University Hospital.

Case I.—Mr. L. A., aged twenty-eight years, Danish farmer, was admitted to the surgical clinic of the University Hospital, January 23, 1899. He gave a clear history of an attack of acute appendicitis occurring six weeks previously. On admission to the hospital, there was no evidence of any continuation of the acute condition either locally or generally. There was, however, a distinct tumor, very hard and without pain or tenderness, palpable in the right iliac region and for this condition on April 10, 1899, exploration was undertaken. The tumor mass was found to be intimately connected with the tissues of the anterior abdominal wall. There were softened areas in it but no real pus. The mass was believed to be a neoplasm; the softened parts were curetted, but because of the involvement of the appendix, omentum, caput coli, anterior and lateral abdominal walls, no attempt was made to remove the appendix. Tube drainage was instituted and the wound was closed in the usual way; there was never any evidence of suppuration.

When the patient was discharged seemingly all trace of the tumor had disappeared. According to a report from the patient a few months ago, he has remained well so far as his appendiceal region is concerned.

Pathological Report.—Small portion of tissue sent for examination. Fixed in bichloride and embedded in paraffin. The sections first examined showed a structure composed almost entirely of thin-walled blood-vessels surrounded by a mass of round spindle cells lying in a scanty reticulum. The resemblance to an endothelioma was so great that a preliminary diagnosis of this nature was sent in. Further study with different staining methods showed that the tissue was of the nature of granulation tissue and not malignant. Such diagnosis was therefore sent to the surgeons a few days after the first one. The diagnosis of granulation tissue was based upon the presence of numerous plasma and mast-cells, the rarity of mitoses, and the presence in areas of small vessels having greatly thickened walls and hypertrophic endothelium as in chronic granulation tissue. Staining for micro-organsms negative. Diagnosis, granulation tissue, probably resulting from appendicitis.

Case II.—Mrs. C. S., aged 40 years, was admitted to the University Hospital, March 4, 1899. She complained of intense abdominal pain. Her history showed that she had had an attack of peritonitis when she was sixteen. In November,

1898, and in January, 1899, she had attacks of severe abdominal pain lasting several days. This pain was accompanied by marked febrile symptoms; there was present also during the most recent attack, a tumor in the right iliac region, which disappeared synchronously with the fever.

When admitted to the hospital she had been ill for a week or two; she had considerable abdominal pain, beside many signs and symptoms of an infectious process. There was also slight tumefaction in the right iliac region and about the umbilicus. She was operated upon on March 6, 1899. The incision was made in the right linea semilunaris; a mass was found which involved omentum, small intestines, colon and anterior abdominal wall and which contained many enlarged lymph-glands. No macroscopic pus was present. The appendix, together with part of the attached omentum was removed, the wound drained and closed. She made an uneventful recovery and is now well.

Pathological Report.—The fresh specimen consisted of a flattened nodular mass about the size of a man's fist. On section it was extremely vascular, resembling granulation tissue. Small areas of fat tissue were visible on the cut surface. The material was fixed in bichloride of mercury and embedded in paraffin. The microscopical sections showed the mass to consist of the inflamed omentum with extensive formation of granulation tissue about the blood-vessels and upon its surface. Large areas of small-celled infiltration were present, in some places amounting to purulent collections. In these large numbers of cocci and bacilli were present. Diagnosis, subacute inflammation of omentum following rupture of appendix.

Case III.—Mr. A. J. W., aged fifty-two years, came to the University Hospital on April 17, 1899, because of a large abdominal tumor. He had first noticed the tumor in December, 1898, at which time there was considerable pain and tenderness present and since which time, he had had five distinct attacks of pain occurring in the region of the tumor. He had lost considerable in weight and was cachectic in appearance; at no time while under our observation was fever present. Exploration was undertaken on April 24, 1899. The incision extended from the ensiform cartilage to below the umbilicus and was made in the linea alba. The incision revealed an immense tumor involving the stomach, the sigmoid flexure, the regions posterior to the stomach and colon, the descending colon, and the transverse colon. The tumor was very hard, the neighboring lymph-nodes were much enlarged; there was no suppuration and the tumor did not apear like an inflammatory mass. It was impossible to remove the mass; after irrigating the abdominal cavity with normal saline solution, the wound was closed. The patient made an uneventful recovery from the operation and was discharged in four or five weeks. In August, 1899, the patient reported that he had gained forty pounds in weight and was in perfect health. Three months ago, he reported that he continued to be well and that all trace of the tumor had disappeared.

Unfortunately, no part of the tumor was removed for microscopical diagnosis. It was believed to be malignant and was inoperable. During his convalescence and afterward, naturally the question of a possible tuberculous condition came into mind, but, from observation of the case, it is impossible to conceive it to have been such.

In addition to the above, five other cases have come to our notice in which seemingly malignant growths, or at least seeming neoplasms, have curiously disappeared; three of them occurred in the practice of Dr. J. H. Carstens of Detroit, and two in the practice of Dr. Donald McLean of Detroit. We shall not report them in detail, but merely state that of the first three one was a case in which gastro-enterostomy was performed for relief of a rapidly growing pyloric tumor, believed to be sarcoma. Not only was there relief from the symptoms of obstruction, but there was was marked decrease in size, in fact disappearance of the tumor. At the end of two years the patient died; no autopsy was obtained.

Another was a case in which exploratory incision revealed a great number of small abdominal tumors involving all the viscera. They were thought to be multiple sarcomata. At the end of three years the patient is well.

The third case is one in which all the viscera were involved in one large mass. There were symptoms of pyloric stenosis; the tumor was thought to be carcinamatous and was inoperable. At this time, two years since exploration, the patient is well and the mass has disappeared.

Of Dr. McLean's two cases, one was a patient in whom he was induced to make an exploratory incision, although the large abdominal tumor present was believed to be and was found to be inoperable. Three months later, he had occasion to see the patient and careful examination failed to reveal a trace of the mass remaining.

The other patient was a woman, sixty years of age, who had a very large abdominal tumor. She was confined to her bed because of its size and weight. Nothing was done to relieve her condition, it being believed that death must soon ensue. He had her under observation for four or five years during which time the tumor gradually decreased in size, until it had completely disappeared. The patient lived to be more than eighty years old.

In conclusion, we wish to emphasize a few points which are of some clinical importance:

First, that in spite of skilful clinical observation, the ultimate behavior of a tumor is seldom to be determined except by microscopical examination, and that many seeming malignant neoplasms are taken to be such when really they are but the outcome of an inflammatory condition.

Second, that probably no true neoplasm, malignant in nature, ever disappeared except through retrograde changes induced into itself through in-

fection of the tumor tissue, or through affections or infections of other parts of the body having, by reason of toxins, practically the same effect. To this there are extremely rare exceptions in which the disappearance of the growth takes place by an excess of retrograde processes over those of growth.

Third, that we must look to the inflammatory process, acute or chronic, for the explanation of the appearance and disappearance of these masses of tissue which before and even during exploration appear to be actual new growths.

THE DILATATION OF THE CERVIX UTERI IN OBSTETRIC PRACTICE.[1]

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CÆSARIAN section and symphysiotomy make a great impression on the lay mind and probably to a considerable extent on that of the general practitioner, but we who have performed all obstetric operations know that in reality these two are very simple. To do a forceps operation well is often much more difficult and requires more skill than either, and version and extraction are the acme of obstetric art. Still the number of those who feel competent to perform Cæsarian section or symphysiotomy, and who can command the necessary assistance, is small and chiefly limited to those who are connected with a lying-in hospital, while almost every practitioner of medicine, especially those living in the country or in small towns, is forced to use the forceps and perform version.

The forceps should never be applied before the os is completely dilated, and the same rule holds good in regard to version, if it is to be followed by immediate extraction. The consideration of the means at our command for inducing, increasing and completing the dilatation of the cervix comes therefore as a proper introduction to the discussion of forceps delivery and version. But unfortunately the time accorded each reader of a paper this evening is so short that I can not do more than skim the subject.

During pregnancy dilatation of the cervix is especially needed in abortion cases, artificial abortion, and induction of premature labor. The first two can hardly be called deliveries, and are therefore outside of the scope of the present disquisition.

Labor may be induced in many ways, but some of them have proved vastly superior to others in regard to efficiency, safety, and expeditiousness. While the obstetrician always can perform artificial abortion, it is not so with induction of premature labor. Here the collaboration of Nature is an absolute requisite and must be solicited. We can do much to help Nature, but the one thing we must await from her side is the contraction of the muscular wall of the uterus—without uterine contraction, no labor. In most cases of this kind there is no hurry, and then it is well to use repeated vaginal douches with hot water or alternately hot and cold water. This may be combined with the tamponade of the vagina. Both these methods have, however, the drawback that they impair the epithelium of the vagina, and they may be dispensed with, if a bougie can be introduced into the cavity of the uterus. For this purpose we choose an English bougie No. 10, the French being too flexible. First the bougie is disinfected by immersion for ten minutes in a solution of bichloride of mercury (1-1,000) and lubricated with boiled glycerin, with or without the addition of corrosive sublimate (1-1,000). It is introduced without a stylet, which would make it too stiff. The patient is placed in Sims' position, a Sims speculum is introduced, the cervix is seized with bullet forceps, and the bougie is inserted in one of the sides of the uterus, in order to avoid the placenta, which generally is attached to the anterior or posterior wall. It should be pushed in to its full length except the last two or three inches, which are bent in a circle at the vault of the vagina and held in position with a pledget of iodoform gauze.

When the cervical canal is sufficiently dilated to admit a finger, then the bougie may be removed and Robert Barnes' dilators used instead. The action of the cervical bags may be intensified by placing a colpeurynter in the vagina. If labor pains are not brought on, Champetier de Ribes' large, pear-shaped, inelastic bag may be introduced into the uterine cavity and left till it is pushed out by uterine contraction, or this action may be combined with a downward pull either by the hand or by a weight.

If the bougie and dilators have not brought on labor pains, or at least not sufficiently strong ones, the bag of waters may be ruptured.

Some years ago the injection of glycerin into the cavity of the uterus was recommended, but in some cases it gave rise to hemoglobinuria and chills, and therefore this method should not be used. Finally, the constant electric current may be applied at intervals, like labor pains.

During labor it is, especially in cases of placenta prævia or eclampsia or in threatened death of the fetus, that dilatation of the cervix is called for, and in these cases it is desirable to obtain full dilatation in the shortest possible time. In other cases in which the os opens imperfectly, the cause is nearly always a mechanical disproportion in the size of the fetus and the parturient canal.

I shall now briefly review the means we have of dilating the cervix during labor.

Certain drugs are of more or less value in this respect and may be used where there is no imminent danger or may be combined with the mechanical resources we presently shall enumerate. From olden times belladonna has been used. To smear the unguentum belladonnæ on the cervix must be looked upon as obselete on account of the

[1] Read as part of a symposium on "Means of Artificial Delivery" before the Obstetric Section of the Academy of Medicine.

danger of infection, but in the refined shape of atropine dissolved in sterilized water it may be injected into the tissue of the cervix in the dose of $^1/_{40}$ grain.[1]

The cervical portion may be painted inside and outside with a 10 per cent. solution of cocaine.[2] Chloral hydrate, gr. xv. every twenty minutes for three or four doses, is excellent. Antipyrine, gr. x every half hour, three doses if necessary, has undoubtedly great oxytoxic value, and so has strychnine, gr. $^1/_{30}$, repeated every twenty minutes until gr. $^1/_{10}$ has been given. Quinine in 10-grain doses has also been praised. Ipecacuanha, gr. ij to v, repeated every twenty to thirty minutes, is disagreeble inasmuch as it nauseates the patient, but it conquers rigidity of the cervix.[3]

Among the mechanical means of dilating the cervix I shall first mention tamponade. This may be applied to the vagina, the cervix or the interior of the body of the uterus. A good way is to insert a strip of iodoform gauze into the cervical canal as far as it will go and pack the vagina with the same material or cotton wrung out of creolin (1 per cent.). The next day the packing is removed, and then the internal os will probably be found sufficiently dilated that new gauze may be placed beyond it, inside of the lower uterine segment, where it works as an irritant calling forth uterine contractions.

If the situation is such that we want the os dilated as rapidly as possible, for instance, in a case of uterine hemorrhage, we have different resources, namely, manual dilatation, dilatable bags filled with fluid, expanding metal dilators, and deep cervical incisions.

Manual dilatation is of great value. Those who have not tried it, have no idea how often the cervix toward the end of pregnancy may be so dilatable that in fifteen or twenty minutes it may be fully dilated. Manual dilatation as exercised nowadays differs much from what was known a few years ago. Until then it was really an *accouchement forcé*. We introduced first one finger, then two, three, four, then the whole hand, formed into a cone, always pressing upward with counterpressure on the fundus. In 1894 Dr. Philander A. Harris[4] of Paterson, N. J., taught us his method of dilatation by which the cervix is opened by pressure with the index finger and then dilated by lateral pressure exercised with the crossed thumb and fingers, using the flexor muscles. I regret that time does not allow me to say more about this method than that it has given entire satisfaction in my hands.

The other modern method is that of Bonnaire of Paris (1897). The first step is the same as in Harris' method. When the cervix is closed, the right index-finger is pressed through the whole cervical canal. It is then used to massage the surrounding tissue in an eccentric direction, until the index-finger of the other hand can be brought in, back to back with the first. These two now exercise lateral pressure until a third finger can be introduced, and so forth, until the three longest fingers of each hand are inserted, by means of which the cervix is fully dilated.

Either of these methods is preferable to the old pressure with the cone-shaped hand, which is apt to cause great tears, and it is preferable to any hard dilating instruments. Having the fingers directly in contact with the tissue we press on, we can better judge of its condition, and treat it with greater gentleness.

Bags capable of being filled with fluid are also of the greatest value. We have two classes of apparatus, the elastic and the unyielding. The elastic bag was first used in the vagina as Braun's colpeurynter, then in the cervix as Robert Barnes' fiddle-shaped bags, and, finally, in the uterus above the cervix—Tarnier's balloon.

Braun's colpeurynter acts slowly by inducing uterine reflex action. Tarnier's intra-uterine bag obtains the same by action directly on the lower uterine segment. Barnes' cervical dilators add to this irritation direct expansion of the cervix. They are most excellent as far as they go, but the largest dilatation obtained by them is only seven inches in circumference, or about two and one-quarter inches in diameter.

It was therefore a decided progress when Champetier de Ribes in 1888 invented his pear-shaped, unyielding bag, which when fully dilated measures nearly four inches across the base. German obstetricians (Mäurer, Arthur Müller and others) have made the bag much stronger and applied a new principle to it by attaching a rope to the tube of the bag, leading it over a pulley, and hanging weights weighing from one to three kilograms at the other end of the rope.

But in spite of indisputable merits these instruments are not without drawbacks. They are apt to provoke too rapid and violent labor pains, they favor the prolapse of the umbilical cord, and they may push the presenting part away from the brim of the pelvis. It is also a drawback that special, somewhat expensive and heavy forceps are needed for their insertion. The bag is particularly praised for induction of premature labor, which it accomplishes in much shorter time than does the bougie treatment.*

It is also of the greatest value in cases of placenta prævia, the treatment of which it has changed. Instead of turning by Braxton Hicks' method and using the thigh and breech of the fetus as tampon, the large unyielding bag, introduced through the torn membranes or perforated placenta, arrests the hemorrhage and allows the use of the forceps, which in Pinard's service has reduced the maternal mortality to 2.6 per cent. and the infantile to 6.8 per cent.[5]

The hard dilators can also be divided into two classes—those with which pressure is exerted all over the circumference, but chiefly in the direction of the longitudinal axis of the cervical canal, and those which exercise only lateral pressure, but then necessarily only on comparatively small parts

* Rubeska, of Prague, Centralbl. f. Gynäkologie, Vol. XXIV., p. 1158, reports an average of thirty-five hours compared with fifty-five hours.

of the cervix at a time. The first class of instruments is either cone-shaped or olive-shaped—Hanks' coniform dilators, which are a modification of Hegar's, his large olive-shaped dilators, and my own olive-shaped dilators, which fill the gap between the two. These instruments are all appropriate in abortion cases. In delivery at or near term, the other class is preferable. There is a variety of hard dilators with a number of branches varying from two to four—Arthur Müller's, Starlinger's and Gau's have two, Tarnier's and Bossi's three, Schwarzenbach's four.[6] They differ also much in the shape of the distal end. Starlinger's has a very thin part near the end, which evidently is meant for entering a narrow cervix, but makes the instrument too dangerous. Tarnier's, Bossi's, Arthur Müller's and Gau's have the distal end flattened and bent outward so as to prevent the instruments from slipping. I think Bossi's instrument (1890) is most used, and the reports about its efficacy are quite favorable. In severe labor cases the cervix can be opened in from fifteen to twenty minutes[7] and in abortion cases sufficient dilatation is obtained in five or six minutes.

To instruments applies the same that I have said about manual dilatation. Lateral pressure, even if it is exercised only on a few points of the circumference at a time, is to be preferred to the pushing upward of large bodies in the direction of the cervical canal. By moving the rods of the expanding dilators around to different parts of the cervix we obtain an even dilatation and are less apt to tear the cervix and the parametria.

Finally, we have the method of cervical incisions. To make multiple small incisions in the circumference of the os is an old method that often has proved useful in overcoming rigidity of the cervix, but sometimes the incisions tear out.

Deep incisions, 2, 3 or 4 in number and dividing the whole vaginal portion out to the vault of the vagina, are perhaps also an old method[8] but the procedure has become more generally known through Dührssen of Berlin. In order to obtain the full intended length of the incisions, it is necessary to seize the cervix with two pairs of bullet forceps and cut between them.

The advantage of the method is that it affords space immediately, but it is only indicated when the cervix is obliterated and the os not sufficiently dilated. There may also come hemorrhage after delivery when the pressure exercised by the presenting part ceases; the danger of infection is increased, the incisions may not heal together, and in spite of their length, they may tear and extend into the parametrium. If these incisions are made at all, it is better to close them with sutures immediately after delivery, by which hemorrhage is arrested and linear union without cicatricial tissue is obtained. But this is in itself not easy. I think this method can hardly be recommended when compared with bloodless dilatation with hands or instruments. The deep incisions may save a child's life, but it exposes the mother to immediate danger and remote suffering.

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THE PANTHERAPIST AND NEOTHERAPEUTICS.

BY C. H. KERMOTT, M.D.,

OF FORT TOTTEN, N. D.

WE ARE living in an age of expansion and rapid progression. Expansion generally follows united efforts. By the union of States the United States of America has become the greatest nation upon the face of the globe. By the union of nations every separate nation is compelled to respect its own people and to punish them, when it is deserved by them.

A union of the different classes of therapists which we have in the State of North Dakota, would bring about a much more satisfactory condition of affairs than that which exists at present.

We do not doubt that all classes of physicians in this State are doing the best they can, and that there is perfect honesty in their intents. Each class, so far, is trying to run in the particular groove in which it has been educated. When these classes met with those not of their ideas there is frequently a clash, and, as in a hurdle race, each tries to throw obstacles in the way of the other; invariably one, but generally both are injured.

The Pantherapist.—The Pantherapists (παν, all, and θεράπευω I care for), as the name implies, are those who in their care for all are ready and anxious to draw their information from any and every source that is conducive to lessen the cause ot disease, restore the health of the afflicted, and assist all who come under their care to be hale, hearty and happy. Any class of men who exert themselves to this end is deserving our sympathy, support and cooperation. They who would help others and make them happy should themselves possess healthy bodies, cheerful countenances, and give hearty greetings, laugh and be happy.

Among physicians none antedate the allopathists or regular physicians. They have spared no expense in obtaining their education, nor placed any limit to their researches or modes of treatment. They have investigated man, his mechanism, composition, constitution, and differentiation in every manner imaginable, both physically and mentally. They have examined the kingdom of Nature, if not thoroughly, yet more thoroughly than any other class of physicians, in order that they might have all that could be obtained to prolong life and procure health and

happiness. When we consider our extensive research and labor, can we not claim the name pantherapist? We are so in practice; why not in name?

Other classes of physicians have not been idle. The homeopathists, although their system at first appearance is diametrically in antagonism to ours, have brought to light much useful information. They have had success in pedriatics, and many a living mother and father are untiring in their praise of the homeopathist for having restored their children to health when others have given them up to die.

The osteopathists also command our attention in restoring to health those whom many physicians thought and pronounced incurable; by their system, it is claimed, a better circulation of the vital fluids is produced.

There are others whose aim it is to cure disease, and whom we believe to be honest in their convictions, as the eclectic, the electrotherapist, the heliotherapist, the hydropathists, and others.

In fact, I believe it is our duty to honor and respect those who teach openly that which they believe, but I have no faith in those who practise their arts (if they have any) in secrecy.

As an individual I must protest against what is termed "Christian science" and "faith cure" as an outrage upon civilization, as a farce played to delude the ignorant, and as a cause of many an untimely death from neglect of proper treatment. Christianity and faith I believe are both necessary for our eternal happiness and for our spiritual existence; for our physical existence physical remedies are wanted, and these the Almighty has lavishly provided for us to take advantage of. The Christian scientists and faith curists are the only ones so far as I am personally concerned, whom I would not be willing to have enter the pantherapic ranks.

Should such a union of earnest, honest physicians take place, though holding different opinions, the result would be in many respect advantageous, because (1) a better acquaintance with one another would be established, and this would promote an interchange of ideas, and (2) in union there is strength.

Then let us measure idea either with or against idea. Though we who contend may each die with our individual ideas, yet those who examine that which we have said or written will be able to select the truth, or approximate it. Truth will stand the jar of all opposition and they who will hold it need not be backward in speaking or writing it.

Let the regular physicians organize and invite all who are honestly practising the healing arts to unite with them, the only demands to be made upon the members to be fee sufficient to cover necessary expenses and to comply with the rules of the order. After a set time, and when we are acknowledged as a body of regular practitioners by the legislature, let none enter our ranks without an examination by a board of at least six members and a president. Let the motto of our order be. "Prove all things. Hold fast that which is true."

Then, were it left to my choice, I would require answers on the following subjects from those who desired to unite with us: Human anatomy, morbid anatomy, regional anatomy, chemistry, physiology, histology, toxicology, obstetrics, description of diseases, classification of diseases, diagnosis of diseases, minor surgery, and at least twelve of the most important medicines selected by the board from some first-class materia medica, as approved by them.

It is better to have few tools and know how to use them than a great many and not understand their uses.

The course of examination would probably be enlarged by questions added from works that the allopaths have never handled, but let no questions be propounded, unless either text-books can be procured on the subjects or printed lectures may be had. This will call for neotherapeutics.

Neotherapeutics.

Neotherapeutics (νεος, new, and θεραπευταχη care) does not necessarily change the *modus operandi* in the treatment of diseases in which drugs only are used, but in using other treatments the change is marked. Very often two or more modes of treatment are so combined as to restore the patient to health in a few days and also to afford a pleasure to the invalid during his illness.

A great revision in medical remedies should be considered. We have, in fact, so many medicines to think of that we become sometimes almost lost when the time comes for selecting something for a particular case. Not the question, "What is good"? but, "Which is best"? Many of our medicines, too, should become obsolete, or kept only as a curiosity for the medical antiquarian. Others which have been dropped should be brought into prominence, as bole armenia, which by its peristallic action on the intestines, triturated with quinine, might be classified with the specifics in the cure of typhoid fever. No cathartics are needed.

Dakota is young, only entering upon her years of manhood, and her young physicians have sprung from as noble stock as Eastern States ever possessed, and with expanding talents have as good a right to form a broader platform than ever yet was formed and enter thereon as any had in past ages. Organize. Discard the doubtful medicines. Select those thoroughly tried and approved. Let us profit by the experiences of others, and remember your remedial agents should be as varied as your patients are. What would you think of a man who would attempt to repair a watch with such a set of tools as they repair locomotives with? And what do you think of men who attempt to repair the health of strong and vigorous men, when temporarily ill, with the same remedial agents with which you would attempt to restore the health of babes?

Let prejudice no longer fill our minds to cause us to think that we are the lords of creation, and

that "when we perish wisdom will perish with us." Others may be as wise perhaps wiser than we are, but their wisdom runs in another channel than ours. If we receive from them that which they have and impart to them that which we have, both will be benefited.

Variety is one of Nature's laws. Think of the variety of esculent plants that grow in one garden, or on one continent or in the world, all used for food, each having its peculiar habits and each adapted to the people with whom it is found. Each when eaten has its peculiar effects on the human system, when properly selected, masticated and digested, each particle helping to repair the waste of the body, and in turn improperly used these very foods produce pain, sickness, and finally death.

The physician, then, ought to be an instructor and teach the healthy to remain as they are and the sickly how to live. When proper food will restore health, do not resort to medicine. When a sound mind is required, give proper mental food or rest of mind, as may be necessary; these failing call in a specialist.

I think it was Cowper who wrote, "Lands separated by a narrow frith abhor each other, and mountains make enemies of nations." The railroads and steamboats have done away with Cowper's times. May not also *mental railroads* and newspaper navigation do away with the opposition that has existed among physicians and lay a broader platform than ever yet has been laid? All are needed who can render help in the cure of those who are diseased, either mentally or physically. May we not call that platform pantherapism?

"What are you going to do with the allopathists," says one, "dispense with him?" Not by any means. If the different therapies have severally saved lives by the hundreds, allopathy has saved its thousands. And the allopathist who can show himself skilled in his profession should be a specialist and entitled to special fees. Write iatropist (ιατρος) after his name. Give honor to whom honor is due and let each class have its own specialists. All specialists, then, should rise from the platform of pantherapism. On this platform each man has an opportunity of becoming broad-gauged, so when he rises above this stage to special work and needs assistance he will better know what other specialist or specialists to call to his aid. The young pantherapist should have resort to but few medicines, but necessarily twelve and not exceeding twenty-five. This number will not require much time to master, and should not be considered burdensome to the osteopathic, the electrotherapist, the hydropathist, the hysteropathist, or any other specialist or practitioner who may at times require them, and in the hour of danger he will be enabled to make a judicious decision.

Learn from the little sapling which expands its roots in every direction, some running deeply into the earth for water and minerals, others through the sands and alluvial deposits, drawing nourishments from the various foods that Mother Earth keeps in her cupboard, receiving just enough and no more than is necessary to satisfy its requirements, growing day by day, spreading its numerous branches, gladdening the hearts of men, and continues to grow until it stands proudly as high as the tallest trees around it, and finally may tower even above its fellows on account of its nutritious diet.

Let the young physician draw sustenance from every branch of the healing art, so that by reason, comparison and experience with the wholesome diet he has received from every source, whether from the mental, moral or physical world, those who come under his care may know and feel that the sources from which he has drawn his knowledge are not shallow, but deep.

A CASE OF DOUBLE PENIS, COMBINED WITH EXSTROPHY OF THE BLADDER AND SHOWING FOUR URETERAL ORIFICES.[1]

BY CARL BECK, M.D.,
OF NEW YORK.

THE case which I present is unique. There are only two cases of double penis on record—one by Velpeau[2] and William Acton[3] and the other by Küttner.[4]

In Velpeau's case a child of six months had two well-developed penes. There was also a supernumerary leg. The urine was discharged synchronously from both urethræ. Velpeau assumed that there was only one bladder.

Küttner describes a specimen taken from a newborn child which showed two scrota, each of

FIG. 1.

them containing one testicle. The two penes were well developed. There was one bladder from which originated the urethral channel, surrounded by a normal prostate. There were also normal seminal vesicles. Just in front of the prostate the bifurcation began.

In my case not only are two well-developed penes present, but there are also four ureters, which can be examined the more easily because there is a complete exstrophy of the bladder

[1] Presented before the Surgical Section of the Academy of Medicine.
[2] Journal des Connaissances Medico-Chirurgicales, XIV., 30.
[3] Medico-Chirurgical Transactions, London, 1848, 103.
[4] Beiträge fur Klinischen Chirurgie, Band XV., Heft 2.

(Fig. 1). The child is five weeks old and was born of poorly nourished parents who emigrated from Russia three years ago. There is another child two years of age. The baby shows no other abnormality; it is small, but fairly well-nourished; it is breast-fed.

Upon examination two ureteral orifices are seen at the lower margin of the everted bladder-wall, directly above the symphysis and slightly to the left. They protrude considerably. Each one resembles, in shape as well as in color, a small vaccination pustule, the light color contrasting with

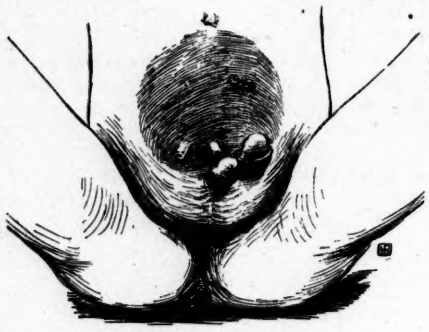

FIG. 2.

the dark-red mucous membrane of the bladder. The distance between the bases of the two urethral projections is three-fourths of a centimeter. Two small protrusions resembling them are found at the upper third of the exstrophied surface on the right near the upper border of the mucous membrane (Fig. 2). They project somewhat less than the other two and their orifices are a little smaller. The distance between them is ½ centimeter.

Both lower ureters discharge urine in the manner usually observed in exstrophy of the bladder.

FIG. 3.

Once in a while, especially when the child cries, a stream of urine about ten centimeters long is discharged from the ureters. The left ureteral orifice is a little wider than the right one, and apparently the stream from it is larger than that from the other. On introducing a probe into each of the lower ureters the impression of the presence of a small receptacle is given. A thin flexible probe cannot be introduced further than three centimeters.

The upper ureters functionate differently. A probe can be introduced into both to a depth of a little more than one centimeter. Urine has not been detected at the median orifice, but once in a while a drop issues from the external one. The trigonum Lieutaudii is pronounced neither at the upper nor at the lower urethral region.

At the inner surface of the symphysis, partially covered by the protruding bladder-membrane as well as by the scrotal folds, are two well-developed penes, placed side by side. It is only after pulling the latter downward and the mucous membrane upward that they both appear conspicuously (Fig. 3). They are of different sizes. The larger one has greater dimensions than could normally be expected in proportion to the age and size of the child. The direction of the basal insertions is toward the left, as if they would merge into left Poupart's ligament. The length of the larger penis is three centimeters from its symphyseal base to the top of the glans; that of the smaller one is only two.

The glans of each penis is very well developed; there are no adhesions of the membrane to the surface of the glans. The urethral orifices are normal within the extent of the glans. A probe can be introduced a distance of one centimeter into the larger and three-fourths of a centimeter into the smaller penis.

That both penes contain erectile tissue became evident from the well-marked erection which was observed shortly after the operation for exstrophy of the bladder. The bases of both penes show a cartilaginous consistence and give the impression that a bulbus is present. The relations to the rectum appear to be normal. Whether the prostatic gland and seminal vesicles are also present, I am not yet able to determine.

A skiagraphic examination showed a considerable gap in the symphysis. There is a very large scrotum divided by a well-marked raphe. Between the two penes is a large groove which creates the appearance of a second sac. A further report of the case will be made after operation.

A CASE OF CONGENITAL ABSENCE OF INTERNAL GENITALS; FUSION OF KIDNEYS; SINGLE URETER.[1]

BY ALLEN J. SMITH, M.D.,
AND
WILLIAM GAMMON, M.D.,
OF GALVESTON, TEX.

THE specimen to be described (No. 42, Pathological Museum, University of Texas) was obtained from the body of an American-born girl, M., daughter of Italian parents, dead at the age of sixteen years from an attack of tetanus. She was brought into the surgical wards of Sealy Hospital under the care of Prof. James E. Thompson, Nov. 22, 1894, and died fifteen days after admission. After death autopsy was not permitted

[1] From the Pathological Laboratory, University of Texas, 1901. No. 4.

by the parents; but the absence of the vagina having been discovered while catheterizing the patient by one of the writers (W. G.,) at the time house surgeon in the hospital, a postmortem perineal operation was performed and the specimens obtained in this way. In the haste and difficulty of manipulation the ureter was cut and exact examination of the pelvic cavity and renal region impossible; but, in the brief investigation afforded, no structures of ovarian, uterine, liga-

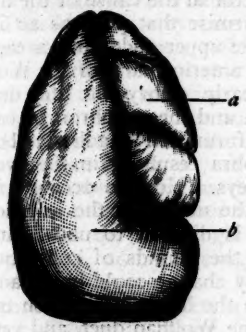

FIG. 1. Fused Kidneys, ventral view; *a*, smaller, probably left, organ; *b*, larger, probably right, organ.

mentous or tubal nature could be detected, and no cord-like structures could be seen or felt to represent these parts, and it is believed that nothing of the sort existed.

The condition of affairs is fairly represented in the accompanying diagrams. There was but one kidney mass (Fig. 1, anterior aspect of kidney; Fig. 2, posterior aspect of same, showing pelvis and beginning of ureter and renal vessels), occupying the position of the right organ. This

FIG. 2. Fused kidneys, dorsal view; *a*, smaller organ; *b*, larger organ; *c*, renal view; *d*, renal arteries; *e*, pelvis serving for both of the fused kidneys, provided with single ureter.

organ weighed a trifle over two hundred grams; measured 12 cm. in greatest length, 7.5 cm. in width, and 5 cm. in thickness at thickest part. From the size and shape one is led to regard this mass as the result of fusion of the two organs (fusion of right and left metanephra). In Fig. 1 and Fig. 2 the portion marked *a* corresponds with what should have been the left kidney; that marked *b* with the true right kidney; the letters *c*, *d*, and *e* in Fig. 2 marking respectively the renal vein, renal artery and pelvis of the kidney. Careful search through the perineal opening was made for a possible kidney upon the opposite side, but none could be detected and but a single ureter could be found, the bladder showing no trace internally or externally of other ureter than the right one, which opened in the usual situation. This ureter was in every way normal in appearance; at its superior end it opened into the pelvis of the fused kidney as indicated in Fig. 2. The pelvis included two major cavities, a superficial one from which the ureter arises (into which two papillæ of the superior portion of the kidney, *a*, opened), and a deeper part extending between the two portions of the kidney mass (into which all other papillæ of both parts of the fused organs projected); the latter pocket communicated with the first by two openings, each about 3 mm. in diameter.

The external genitals (Fig. 3), while perhaps

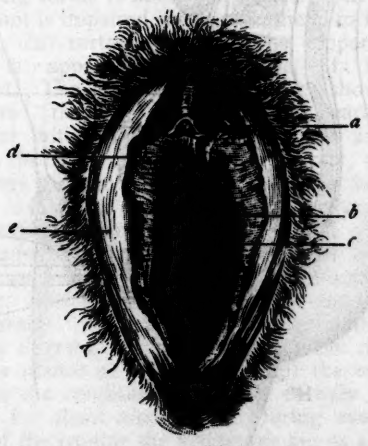

FIG. 3. External genitals; *a*, clitoris; *b*, meatus; *c*, opening of rudimentary vagina; *d*, labium minus; *e*, labium majus.

smaller than might have been expected, were of perfect conformation, and the usual pudendal hairs were present in appropriate number. On separation of the labia (Fig. 3, *d*, labium minus; *e*, labium majus), however, while a clitoris (Fig. 3, *a*; Fig. 4, *d*) of normal size and position and a normally situated meatus (Fig. 3, *b*, Fig. 4, *c*), of usual appearance are seen, the vulva appeared merely as a shallow pocket (Fig. 3, *f*; Fig. 4, *g*), measuring from anterior to posterior commissure eight centimeters, with a greatest depth from the convex surface of the labium minus of one centimeter, this depth being attained in the posterior third of the *cul-de-sac*. In the wall of this vulvar pocket, immediately back of the meatus urinarius, there was a small papilla into which extended a tiny tube, admitting a small pocket-case probe to a distance slightly less than one centimeter and ending blindly in the fibrous structures surrounding the urethra. (Fig. 3, *c*; Fig. 4, *h*). This tube is

the representative of the vaginal canal. Upon removal of the specimen the posterior wall of the bladder and the anterior wall of the rectum were found closely approximated, the intervening space extending down to the perineum being occupied by loose fibrous and adipose structures, and there could be found nothing in the least suggesting rudiments of uterus, tubes, broad ligaments or ovaries. The base of the bladder and the urethra (the latter measuring two centimeters in length) were surrounded by a somewhat increased amount of dense fibrous tissue, in the midst of which the rudimentary vagina terminated blindly; and while no microscopic examination of this tissue was made, careful dissection did not reveal trace of any structure suggestive of the missing parts.

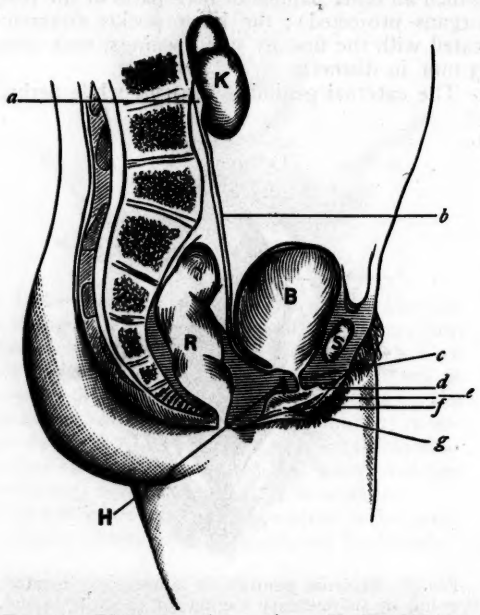

FIG. 4. Diagrammatic section; *K*, fused kidney (occupying situation of right kidney); *R*, rectum; *B*, bladder; *S*, symphysis pubis; *H*, rudimentary vagina; *a*, pelvis of kidney; *b*, ureter; *c*, urethra; *d*, clitoris; *e*, labium majus; *f*, labium minus; *g*, pocket of vestibulum of vagina (vulva).

It is not impossible that some ovarian rudiments in the pelvis or higher up near their place of origin in the lumbar region might have been found had it been possible to dissect the body with the usual freedom of a postmortem examination; but careful search was made by palpation through the perineal opening without avail, and the writers believe that none existed.

As far as could be determined no knowledge of the existence of this abnormality was possessed by the girl or her friends. She had always maintained fair health, but had never menstruated; nothing suggestive of vicarious menstruation could be learned after her death. The body presented the usual feminine configuration, and the mammary glands and mons veneris were amply developed. Private information stated that the girl had frequently indulged in some type of intercourse with males, and that she was of passionate nature. How coition could have been satisfactorily accomplished is difficult to understand; and why the malformation was not at such times detected is likewise a problem. Possibly it was known secretly, but no information could be obtained upon this line.

It is unfortunate that a closer examination was not permitted with a view of possibly determining some factor in the cause of the malformation. One may surmise that perhaps an inflammatory process in the upper abdominal area, corresponding with the anterior parts of the Wolffian bodies, existed in early embryonic life, destroying the pronepheron and mesonephron of each side, and causing the formation of adhesive bonds between the metanephra resulting in the eventual fusion of the kidneys. How to account for the utter absence of the ureter on the left side by such a supposition is difficult to understand; yet it is not beyond the bounds of conjecture that such inflammatory change could have caused sufficient alteration in the left metanephron to prevent the growth of the Wolffian duct, and yet not entirely destroy the essential structure of the former and its chance of partial development. The small size of the upper part of the renal mass, which the writers regard as representing the left kidney, would suggest that such partial involvement of the primitive kidney is not impossible. An investigation of the relation of surrounding structures to the renal mass, of the position of the abdominal vessels and their conformation, and of the bowel wall, for a possible remnant of this left Wolffian duct might have thrown further light upon the subject.

The attack of tetanus from which the subject died was believed to be due to infection of an ulcer of the leg. The course of the case was peculiar in that after some days in the hospital under the usual treatment of chloral and the bromides, the tetanic symptoms disappeared, but the patient's general condition did not improve and several weeks after entrance she died from exhaustion. Probably dependent upon the infection, and also probably a factor in the death of the girl, should be mentioned a moderate degree of cloudy swelling of the kidney, apparent both grossly and microscopically in the specimen described.

A FEW REMARKS ON A GENERALLY UNRECOGNIZED EAR DISEASE (OTITIS MEDIA MUCOSA.)[1]

BY HENRY A. ALDERTON, M.D.,
OF BROOKLYN, NEW YORK.

DURING the winter 1900-01, because of the great prevalence of grippal and ordinary colds, the writer's attention was repeatedly drawn to the unusual frequency of exudative, non-perforative otitis media. The past year, in his experience,

[1] Read before the Am. Lar., Rhin. and Otol. Soc., N. Y., May 21, 1901.

because of the increased virulence of the causative nasopharyngeal inflammations, the type has inclined more to the mucous than to the serous form of exudative inflammation. And, for this reason, its recognition has been attended at times with much greater difficulty. Unlike the serous exudative inflammation, *otitis media serosa*, the mucous form appears to occur relatively more frequently in adults.

Following a severe cold, grippal or otherwise, the patient begins to have trouble with one or both ears. Possibly this may take the form of an evanescent earache, which yields quickly to the ordinary or extraordinary home remedies; in other cases no pain at all is noticed. Tenderness to touch of the parts around the auricle is more common and frequently recurs during the early part of the disease. In a day or so, whether there has been earache or not, hardness of hearing makes itself manifest, together with a feeling of stuffiness in the ear, as though the external canal were plugged, and a feeling of fulness, both in the ear and over one or both sides of the head, according as the affection involves one or both ears. Frequently there is present an intense tinnitus, which is either hissing or pulsating; often the tinnitus is likened to escaping steam. There is usually no sensation of throbbing, such as exists so often in an acute purulent otitis media. Because of the stuffiness and full feeling in the head, cerebration is difficult and concentration is a lost art. Autophony is usually noticed. Cracking sounds on blowing the nose or swallowing are not so frequently observed as in the serous condition, probably because of the greater degree of tubal obstruction. The patient is unhappy, fearful for the future and, because of his infirmity, unable to attend to his business. The hearing becomes so badly involved that the watch is heard not at all or only close to the ear and conversation is indulged in only at the cost of considerable exertion on the part of the patient's family and friends.

If the exudation is formed rapidly and in considerable quantity, mild vertiginous attacks may occur. These attacks are not severe and mostly consist of a dizzy feeling, sometimes occurring on changing the bodily position. There is none of the other phenomena associated with Ménière's symptom-complex.

Because of the patient's anxiety for relief, he usually calls upon the aurist during the first week of the disease. On examination, after the removal of whatever detritus maceration and home remedies have evolved in the external ear canal, one finds that the osseous canal wall, unless irritated by overtreatment, has very little congestion and there is no swelling. There may be slight tenderness over the tragus or over the position of the Eustachian tube in the neck. The tympanic membrane is seemingly in about its usual position, neither retracted nor bulged to any appreciable extent. As a whole it may be pushed out a little more than normal toward the canal. The luster is gone, the surface has a dull gray, leaden appearance. Surrounding this dull gray field is a ring of congestion and coursing across the field are a number of separate capillary, twigs beginning at the periphery and disappearing towards the *umbo*. Along the hammer handle the malleal plexus is unusually pronounced. This hyperemia does not resemble, except remotely, that of a beginning purulent otitis media; it is dull and grayish red, not brilliant and distinct as in the latter affection. Schrapnell's membrane does not seem to be markedly affected. There is absolutely no fluid line discernable, nor can the presence of fluid be made out by any difference in the appearance of the various sections of the drum membrane.

Functionally, the ear is apparently very gravely involved. The watch is not heard or only on contact or very close to the ear. The whisper is heard for a very short distance, but the hearing for the spoken voice is relatively somewhat better. Bone conduction, for the Hartmann series of tuning-forks, is normal or better. The lower tone limit is impaired, even up to the C fork (128 d.v.s.), in certain cases. The upper tone limit is apparently very little, if at all affected. The intensity Rinné test shows as negative (that is, initial BC is heard better than initial AC), in marked cases as high up on the scale as the C^3 fork; rarely, the C^4 fork may give an equal reaction. The duration Rinné is likewise negative for the lower forks. In a unilateral affection, Weber's test is positive.

Examination of the nasopharyngeal cavities shows an active or retrogressing inflammatory process. The pulse and temperature are practically normal. Such a condition may endure, in various degrees, for from only a week or two up to a matter of years; in one of the writer's patients the condition had never entirely disappeared for about nine years. During exacerbations of the trouble the symptoms are as already detailed; with the subsidence of the congestive period the radiating vessels disappear, the drum membrane becomes uniformly a dull gray and remains thick and opaque, and the functional ability is slightly improved.

Change in the position of the patient's head does not induce the improvement in the hearing which is sometimes noticeable in cases of otitis media serosa. Inflation of the tympanum improves the hearing, though only temporarily, and never to the degree usually seen in the serous process. During the process of inflation mucous crackles can usually be heard with the otoscope.

Incision of the tympanic membrane alone sometimes gives exit to no secretion or to only a little teat-shaped projection, hardly visible through the hemorrhage from the cut edges. The drum membrane is often so thick and fibrous that considerable force is necessarily exerted in order to penetrate into the tympanum. But on forcible inflation the picture is changed. Then there appears in the canal a quantity of stringy, tenaceous mucus which follows the cotton on the applicator on its withdrawal from the canal as a long, fila-

mentous string, for a distance of a number of inches from the external auditory orifice before it finally consents to part company. Often, in order to evacuate the drum cavity, it is necessary to inflate forcibly and repeatedly, assisting the extrusion of the mucus with the cotton applicator or with suction. After the removal of the exudate the hearing is immediately greatly improved and remains so until the incision heals and more mucus is formed.

Douching alone through the external canal has never seemed to do other than harm, in the writer's experience. Periodical inflation, combined with treatment of the nasopharyngeal condition, will in a certain proportion of cases bring about a slow recovery, but often the patient is not willing to await the results of so slow a process and gravitates from one to another practitioner, the true condition frequently being unrecognized, until permanent impairment of the function of the ear results from the inspissation of the exudate or the formation of adhesions or the deposition of connective tissue in the mucous membrane of the tympanum by reason of the prolonged hyperemia.

Certain systemic remedies seem to be of benefit; such, for example, as the iodide of potash in increasing doses. But the treatment *par excellence* consists of incision and evacuation of the tympanum, repeated if necessary and always accompanied by regular politzerization and conscientious treatment of the nasopharyngeal condition. The relief is immediate and, while subject to temporary setbacks, permanent for the current attack. Before incision the external auditory canal should be made as nearly aseptic as possible by syringing with a tincture of green-soap solution, following this with instillation of absolute alcohol and then by syringing with a 1-2000 bichloride solution. The canal is then packed with aseptic gauze and the patient sent back to the waiting-room for half an hour to await the subsidence of the increased hyperemia necessarily induced by these procedures. The patient is then subjected to a thorough cleansing of his nasopharyngeal cavities. The gauze packing is removed and under good illumination a thorough incision is made with a sterilized knife along the inferior segment of the drum membrane just internal to its attachment to the *annulus*. The ear is inflated and the mucus removed by means of sterile cotton pledgets. Finally, the canal is again packed with aseptic gauze, covered outside by a cotton pad kept in place by adhesive plaster. A mild astringent application of a solution of silver nitrate or glycerite of tannic acid or the stronger glycerite of tannic and carbolic acids is applied to the postnasal mucous membrane.

The patient must be seen in from twelve to twenty-four hours and the ear again gently inflated and the gauze packing renewed. After this, a treatment once in every two or three days is all that is usually necessary. Often the drum membrane may have healed by the first dressing.

Should the exudate persist in reforming, a solution of nitrate of silver, ½ to 1 grain to the ounce of boiled distilled water, acts favorably, both injected into the Eustachian tube and instilled into the tympanum through the incision. The writer has never seen undue reaction follow this procedure, if the previous steps have been faithfully carried out.

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THE LOCAL TREATMENT OF GONORRHEA.[1]

BY E. O. BARDWELL, A.M., M.D.,
OF EMPORIUM, PA.

ONE of the most disagreeable diseases, one of the most unsatisfactory and annoying complaints that the general practitioner is called upon to prescribe for, is gonorrhea in the male. It is a disagreeable disease *per se*. It is often quite difficult to secure a satisfactory result in a reasonable time with ordinary remedies, even when directions are carefully followed, and it is almost invariably impossible to exercise such supervision over a case as to be at all certain that directions are followed with any care whatever.

When a case is cured in two or three weeks the physician receives no particular credit, as it is supposed to be no more than any physician can do, if he wants to. When, however, the thing runs along for several weeks, as it mostly does, then the curses hurled at the devoted doctor's head are many, loud, and deep.

During an active practice of twenty-two years I have seen a large number of cases of gonorrhea and have witnessed quite a good many attempts to cut the disease short in its incipiency by the use of strong injections. I do not know that I have ever seen a clear-cut success when the case was beyond doubt a genuine gonorrhea. I do know, however, that I have seen quite a number of horrible failures. One in particular, which always occurs to me when on this subject, was that of a young married man, who, when the indubitable proof of his moral obliquity stared him in the face, followed the advice of a friend and passed a solid stick of lunar caustic into his penis. He withdrew it at once, of course, and the evening of the same day he came to me with his penis about three times its normal size. It may be set down, in my opinion, that the aborting of cases of "clap" by the use of strong injections is uncertain, unsatisfactory, and dangerous, and ought never to be attempted, at any rate in a first attack, and in a mild case using injections or irrigations of more than an ordinary strength can do no good and is very likely to be productive of injurious results.

For twenty years copaiba and oil of sandalwood, separately, or in combination, have seemed to me to have a good effect in the first stage of gonorrhea. In many cases, however, the good effect proved only transitory. The copaiba very often nauseates and sometimes cannot be tolerated at all. In these cases spirits of turpentine, two

[1] Read before the Elk County Medical Society, Ridgway, Pa.

or three drops in combination with cubebs in an emulsion, taken largely diluted has seemed to have a beneficial action. Sandal-wood oil often causes severe pains in the lumbar region and probably at least ninety-nine times in a hundred these remedies alone do not cure genuine gonorrhea, and local remedies must in the end be resorted to. Turpentine, copaiba, and cubebs are entirely too stimulating and irritating, both locally and generally, to be passed into the stomach and blood and strained through the kidneys for the relief of a local lesion situated from one to two inches back of the glans penis, unless the indications for such use are clear, unmistakable, and practically mandatory.

From this point of view all internal specific medication in gonorrhea should be abandoned. These remedies do benefit the local lesion when given in sufficiently large doses; there can be no doubt about that, but when so given they almost invariably derange the stomach and weaken the kidneys, and the undue stimulation of any normal organ is always to be deplored. I have seen many cases in which the digestive disorders and the irritability of the kidneys have continued for years after the ingestion of these drugs had been stopped, and even though there were no other way to cure gonorrhea it has often seemed to me that the administration of these drugs was a doubtful service to the patient. There appears to be, however, in nearly all cases, an undue acidity and concentration of urine that requires the use of a mild, bland, unirritating diuretic, especially in the first stages of the disease, and for this purpose ten or fifteen grains of citrate of potash, either alone or combined with hyoscyamus, will usually be found to answer every purpose. Of course, lithia or sodium may be used in lieu of the potassium if preferred.

I do not know if this condition is due to financial prosperity, the Spanish War, or to commercial expansion; but I do know that I have seen an unusually large number of cases of gonorrhea during the past year, and some of my confrères have also noticed the increased number of these cases prevailing during the year 1900.

In May, 1900, I commenced using protargol as an injection in gonorrhea and since then my results have been more satisfactory than before. It has proved most satisfactory to me in a solution of two grains to the ounce of water, and in this strength I have in many cases begun using the injections the first day of the disease. In two cases which were primary and unusually severe, I gave citrate of lithia internally and morphine by injection into the urethra, for thirty-six hours before commencing the protargal.

The old injections, tannin, silver nitrate, copper, lead, zinc, and hydrastis, I had pretty nearly abandoned several years before, and had used permanganate of potassium with more or less varying success; but I must say that protargol seems to me to be the ideal injection, and in the few cases in which it has not given good results I have found an error in administration. I have used protargol by injection in preference to irrigation, not only because the results appear to be better, but also for the reason that the injection method is much more convenient and the patient is very much more certain to use the treatment thoroughly, and as for the method by irrigation there are many cases that are so situated as not to be able to come regularly to a physician's office, and I have neither the time nor the inclination to give these patients my personal attention every time they need an irrigation.

A few case reports may prove of sufficient interest to justify their reading at this point.

Case I.—The patient came to me the day after he noticed a urethral discharge; he had been in the same predicament before, but professed to be greatly surprised. I prescribed a solution of protargol, one-half of one per cent., to be used three times a day in a proper syringe; patient reported in eight days with no apparent improvement. Strength of solution was then increased to one per cent. injected three times a day; reported again in six days, improvement very slight. I then learned that owing to the patient being an old hand at the business I had not sufficiently instructed him in the *modus operandi*. I directed him to immerse the bottle of solution in a basin partly filled with warm water a few minutes before each injection, or until the solution reached a temperature of from 100 to 110° F.; to urinate before injection; to fill the urethra with the solution and then compress the glans penis and retain the solution five minutes; wait a couple of minutes and then repeat the process; to take this double injection three times a day and report again in five days. He did so, reporting at the end of five days that the discharge had nearly ceased, and he was entirely well three days later.

I find that when patients have previously used injections for gonorrhea it is almost invariably necessary to insist quite strongly on the importance of using the solution freely and of retaining it a sufficient length of time. They have been accustomed to using solutions that bite and they are afraid of anything in the shape of an injection.

Case II.—This patient consulted me about four weeks after the discharge commenced; had been taking one of the old-style sandal-wood mixtures—in fact, an old one of mine that a friend had kindly loaned him—but he denied having used any injection; he was suffering from a severe attack of well-developed orchitis in addition to the urethral discharge which had to some extent subsided. I had him put to bed at once, the testicles properly supported, hot fomentations applied, and ordered an injection of a solution of protargol, one-half of one per cent. The discharge ceased in four days, although when the orchitis began to soften up, in about one week, the discharge again commenced and lasted three days longer, when it ceased entirely under the use of protargol and did not return as before.

Case III.—This patient was a married man who came with the access of the first symptom

and wanted the disorder throttled. I gave him a one-per-cent. solution of protargol to inject, warm, three times a day, two syringefuls each time and told him to report in a few days. He came back in four days and reported the discharge as rapidly diminishing, and in six days said it had ceased entirely. I advised him to continue the injections six days longer, one syringeful three times the first day, twice the second, third, and fourth days, and once at bedtime, the fifth and sixth days, then to immerse his testicles and penis in cold water every night before retiring for a week, and report again. He reported in a week and said there had been no re-appearance of the discharge and he felt sure that he was all right; however, he returned again in two days with a slight discharge, when I increased the strength of the solution to two per cent., one syringeful at bedtime and in the morning, which he used five days, the discharge stopping the second day. At the end of the five days he used the injection four days longer, and abstained from sexual intercourse another week, and has had no further trouble, neither has his wife shown any signs of infection and nine months have now passed.

Case IV.—Young man who expected to be married in a few weeks; first attack; discharge not yet in evidence, but soreness, swelling, redness, and frequent and painful micturition. Citrate of potassium in ten-grain doses, largely diluted, ordered every four hours internally, and a solution containing protargol, one-half of one per cent., and sulphate of morphine, one-fourth of one per cent., as an injection every four hours. After the fourth injection the morphine was left out entirely, and the case progressed very rapidly to a satisfactory termination. The discharge, which commenced soon after I first saw the patient, increased for two days, then subsided and stopped entirely on the sixth day. There was chordee the night after the morphine was discontinued, but it was easily managed.

Case V.—Ordinary typical case of gonorrhea; patient said that he was not surprised and that he deserved nothing less; said when he had had the same old thing previously it had usually taken about six months to get over it, and that he would appreciate my kindness if I would try to do a little better than that. I gave him lithia tablets, five grains each, to take one every four hours in a tumbler of cold water, and an injection of a one-grain solution of protargol to be used warm, three times a day, two syringefuls each time. There was a slight improvement at the end of one week, when the strength of the solution was increased to one and one-half per cent. for another week when the discharge stopped and did not return.

Case VI.—Similar to Case V., except that the discharge had already continued six weeks when I was first consulted. At the end of the first week the injection was raised to strength of two per cent., and at the end of the second week the discharge, having very materially diminished, it was continued at this strength for another week, when the discharge entirely ceased. The injection was then continued in a one-per-cent. solution three days, and then in half that strength for four days longer, when it was discontinued and no further trouble followed.

Case VII.—Essentially the same as the last two, except that I mistrusted that the patient did not refrain from intercourse as I had instructed him to do. The discharge in this case had been running three weeks when I first saw him. I commenced with a one-per-cent. solution of protargol, increased the second week to a two-per-cent., and at the end of the third week, the discharge not having entirely ceased, I prescribed permanganate of potassium, two grains to four ounces of water, and at the end of another week patient was discharged cured and has since remained so. I am not sure that he would have recovered just as rapidly had the protargol been continued instead of resorting to the permanganate of potassium.

I have only treated thirty cases of well-marked undoubted gonorrhea since I commenced the use of protargol, and, although I have finished up in three of these cases by using potassium permanganas, typical samples of the entire thirty cases are given above, and it will be seen that there is no evidence to show that the potassium was really of any assistance. I would probably not have resorted to it at all but for the fact that prior to the beginning of the use of protargol the potassium permanganas had been more favorably considered by me than any other local remedy I had used in gonorrhea up to that time.

Members of this Society who are personally acquainted with the writer will probably not be at all surprised at his failing to allude to the use of the microscope as an assistant in the diagnosis of gonorrhea. To others, however, it may not be amiss to state that I utterly fail to see the immense benefit that is said by some physicians to follow the use of the microscope in this disease. The great majority of physicians who treat gonorrhea could not tell a gonococcus from any other coccus in any event, and as affording sure evidence by which we may be able to protect the innocent party, where parties are married, I always protect the woman anyway so it makes no difference. In regard to the use of the microscope in diagnosis it is my opinion that a doctor who has been in practice twenty years and really requires a microscope to diagnose a case of clap has been in practice about twenty years too long.

In concluding this paper I wish to say that I believe that we have in protargol the very best local remedy yet produced for gonorrhea. The only cases in which it has failed in my hands to cure a case of gonorrhea in less than two weeks were cases in which there was an error in administration. I have found it is quite important that the solution be injected warm, and that it be used in large amount, an ordinary syringeful at each injection, and the injection made two times at a sitting, three times a day, the urethra being well distended, and the solution retained at least five

minutes. I have never seen any bad results from it in solutions as high as two per cent. and would not hesitate for a moment to use a five-per-cent. solution if I thought it necessary or advisable.

MEDICAL PROGRESS.

Purgatin.—Purgatin, the diacetate of anthrapurpium, according to H. VEITH, consists of a yellow, crystalline powder which is insoluble in water and nearly so in alcohol. This synthetic product causes mild purgation in twelve hours after 0.5-1.0 gram without concomitant pains or tenesmus. The patients are to be told of a yellow discoloration of the urine which is liable to set in. The tastelessness of the drug is a further advantage and it is especially recommended in chronic constipation and neurasthenia.

Experimental Ligation of Splenic Vessels.—Through extended animal experiments D. BALACESCU (*Münch. med. Woch.*, Aug. 27, 1901) finds that (1) ligation of all the vessels with the gastrosplenic ligament leads to generally fatal gangrene of the organ; animals may, however, withstand the intoxication,, when atrophy sets in after eight days; (2) ligation of the splenic artery or vein alone is usually stood well, since sufficient collateral circulation is maintained. The atrophy resulting is very slight and slow in developing, but more manifest if the vasa efferentia are narrowed.

Compression Therapy in Heart Disease.—Most clinical observers have noticed the manner in which patients suffering from heart disease instinctively seek relief from painful subjective symptoms by pressing the hand against the præcordium. Abée of Nauheim was the first to suggest the use of some form of apparatus to replace the temporary pressure of the hand by constant mechanical support. M. MENDELSOHN (*Berl. klin. Woch.*, Aug. 26, 1901) believes that the relief which such apparatus affords is not the result of any support or lifting of the heart, but depends upon compression of the chest wall. An amelioration of symptoms is obtained in cases presenting cardiac enlargement, with hypertrophy and dilatation of the left ventricle. In such cases the heart is in direct anatomical relation with the lateral as well as with the anterior chest-wall, and each movement of the heart is forcibly and directly communicated to these parts, producing a notable physical shock. Mendelsohn believes that the painful sensations experienced by the patients reside very largely in the hyperesthetic thoracic wall and not in the heart itself; hence the value of supporting the thorax in the cardiac region, and thus limiting the violent shaking of the parts. In addition, compression of the thorax, to a degree not inconsistent with freedom of respiration, is said to lessen excessive cardiac motion and to abolish disagreeable sensations dependent on such motion. A thorax-compressor has been devised by Dr. Graüpner of Nauheim. A plaster cast of the thorax is first prepared, and from this is cut the part which corresponds to the superficial cardiac area, overlapping this area by two or three finger-breadths at each margin. From this cast a metallic plate is prepared, and to the inner side of the plate a flat air-cushion, extending over the entire surface, is fastened. It is advisable to have attached to the air-cushion a rubber tube long enough to permit the patient to blow up the cushion when the latter is in place. The compressor is held in place by binders passing over the shoulders and across the back.

Trichinosis in the United States.—Although numerous epidemics and spontaneous cases of trichinosis have been recognized in the United States, the impression is still prevalent that it is an uncommon disease in this country. On account of the apparent lack of systematic research with respect to the frequency of the disease here, HERBERT U. WILLIAMS (*Jour. Med. Research*, July, 1901) has undertaken studies with regard to such occurrence. He examined 505 cadavers, death being caused by other diseases, and found trichinæ present in 27 or 5.34 per cent. He took samples from the muscles (sternocleidomastoid, psoas magnus, diaphragm and rectus abdominis). These specimens were usually about 3 centimeters long and 1 or 2 centimeters in thickness. These were immediately examined or preserved in cold storage or by a weak solution of formalin. They were then studied between plates of glass microscopically with the low power. All of the subjects were over 14 years of age. As all the subjects died of a disease other than trichinosis in every case the infection with the trichinæ must have occurred a considerable time previous to death. The infections were of various degrees of severity, sometimes being very extensive, while sometimes only a few worms were found. A large proportion of the cases were born and had always lived in the United States. An unusually high percentage occurred in insane patients. No eosinophilic cells were found about or near the encapsulated trichinæ. Most cells do not collect in or about the capsules in cases of old trichinosis. Newly formed elastic fibers and plasma cells sometimes are found in this location. The capsule may be invaded by new cells, the worms disintegrate and the capsule become filled with fibrous and adipose tissue. It is evident that many cases of old trichinosis escape detection at autopsies.

When to Operate on Gall-Stones for Radical Cure.—Leaving out of consideration the palliation of malignant or otherwise hopeless disease by the removal of pain-causing gall-stones, M. H. RICHARDSON (*Boston Med. Surg. Jour.*, Sept. 5, 1901) maintains that gall-stones should be removed at the earliest favorable moment after diagnosis, unless there are contra-indications in other viscera or in the patient's general condition. The "earliest favorable moment" is that period of time when there is no infection of the gall-bladder to contaminate the field, no impaction in the common duct to increase the dangers of

dissection and no jaundice to induce hemorrhage or to impair the patient's power of recovery. In favor of this author's proposition it may be said that (1) the operation as a rule is easy and safe; (2) the remote dangers of gall-stones are lessened or avoided; (3) if the diagnosis of gall-stones proves to be wrong, other lesions may be discovered and remedied—lesions perhaps even more serious than gall-stones; (4) late operations on gall-stones are as a rule difficult and dangerous. Operations made imperative by progressive and lethal symptoms must be performed under great disadvantages and dangers; the gall-stones generally are more inaccessible, the dissections deeper, and the patient's power of resistance lessened. While the possibility of spontaneous cure is not denied, Richardson believes that such cure, whether or not it is aided by medicinal treatment, is clumsy, dangerous, ineffectual and contrary to common sense. Once gall-stones begin to offend, there is no way of telling how the process will end; the chances are it will result in disability or death.

Bacteriology of Erysipelas.—The Bacteriological investigations of B. JORDAN (*Münch. med. Woch.*, Aug. 27, 1901) confirm the view that erysipelas is not a specific disease caused by a special bacillus, for experimentally staphylococci, pneumococci and colon bacilli have been found as cause in rabbits. In man the coccus generally found is the streptococcus pyogenes, but there are also undoubted cases where the staphylococcus aureus was the incitor. The question as to whether pneumococci, colon and typhoid bacilli are able to set up a true erysipelas in man must still be considered an open one. The author does not believe in drawing a sharp distinction between erysipelas and pseudo-erysipelas, but thinks that both are merely varying grades of severity of one and the same disease.

Bacteriolysis and Typhoid Immunity.—Typhoid fever is a self-limited disease and experience has shown that, except in certain organs of the body, such as the urinary and gall-bladders, the specific organisms disappear as convalescence approaches. The supposition therefore is that at this time the tissue cells and blood become more and more antagonistic to the bacilli and finally cause their destruction. However this may be inside the body, we know that it does not occur outside of it, for typhoid blood, from sick or convalescent patients, and bouillon make an excellent culture-medium for the bacilli. When, however, these are introduced intraperitoneally into a normal guinea-pig disintegration or "Pfeiffer's phenomenon" occurs. M. W. RICHARDSON (*Jour. Med. Research*, July, 1901) has studied this subject by the experimental observation of the combined effect upon the typhoid bacillus of typhoid blood which contains a specific immunizing element and normal serum which contains a non-specific normal ferment and shows that when they are properly combined they cause a destruction of the bacillus. In typhoid fever Nature produces a cure by the proper combination of these substances which are produced by the body-cells, especially those of the lymphatic apparatus. It is the function of the immune element to bind the non-specific element to the bacterial cell and thus cause its destruction. In the earlier stages of the disease the immune element may be abundantly present and yet be of little value because of the absence of the non-specific element or compliment. In the stage of falling temperature this compliment returns to the blood and a corresponding destruction of the bacilli takes place which sets free the typhoid toxin contained in the bacterial cells and possibly causes the remissions in temperature seen clinically during the fourth week. Inasmuch as the addition of normal serum to the inactive serum of typhoid patients will in most cases make it similar to that present in the fourth week we are justified theoretically in so treating typhoid fever. The immune element might, however, also be lacking in which case it would have to be supplied. This could be ascertained by proper investigation.

Surgery of the Diaphragm.—Two cases of incised wound of the diaphragm which were closed by suture and which recovered are placed on record by C. SCHLATTER (*Münch. med. Woch.*, Aug. 20, 1901). In penetrating wounds of the chest this complication can sometimes be readily seen or felt with the finger, at other times, prolapse of the intestines will give evidence of the condition. Often, however, the diagnosis is extremely difficult and can only be made by enlarging the wound. Symptoms directly traceable to the diaphragmatic injury, such as vomiting and changes on auscultation and percussion, are only exceptional. A knowledge of the character and length of the instrument used will often be of value. The importance of an operation is evident when we consider that the mortality in unoperated cases is 88 per cent. and in the operated only 12 per cent.

Influence of Water, Common Salt and Sodium Bicarbonate on Gastric Secretion.—By means of animal experimentation with gastric fistulæ, FRÉMONT (*Bull. therap.*, 1901, p. 575) showed that distilled water is capable of markedly stimulating gastric secretion; the temperature of water used is of comparatively little moment. Sodium chloride is said to be so mild a stimulant of the gastric mucous membrane that it cannot be relied upon to augment an insufficient secretion; bouillon is a more potent stimulant, and sodium bicarbonate causes the production of a voluminous viscid secretion.

Gas Cysts of the Central Nervous System.—Since the first description of gas cysts of the central nervous system, published in 1899 by Reuling and Herring and also by Howard, this subject has attracted considerable interest. W. T. HOWARD (*Jour. Med. Research*, July, 1901) now adds the study of six new cases. In five of these cases, proved to be caused by bacteria, four were due to bacillus ærogenes capsulatus and one to the bacillus mucosus capsulatus. In two cases of gas in the blood-vessels of the brain (and in

the disorganized brain tissue of one of them), associated with general gaseous emphysema, the first-named organism was present in pure culture in one and in association with the second-named organism in the other. He believes that frequent and more careful examination of the brain at autopsy, especially in cases of general emphysema, will probably show that gas cysts of this organ are more common than is generally supposed.

Albumosuria in Osteomalacia.—The appearance of the so-called Bence-Jones bodies in the urine has been considered as pathognomonic of multiple bone myelomata. G. JOCHMANN and O. SCHUMM *(Münch. med. Woch.,* Aug. 20, 1901) have, however, found the substance in a typical case of true osteomalacia, and by isolating it from the urine have proved that it belongs to the class of the albumoses. The diagnosis of osteomalacia was confirmed by microscopical examination.

Ptomain Paralysis.—The sudden appearance of motor paralysis in a boy of fifteen years and in his mother, aged forty, was attributed by P. A. PREOBRASCHENSKY *(Deut. Zeitschr. f. Nervenheilk.,* 16 Bd., 5. u. 6) to auto-intoxication of the gastro-intestinal type, due to eating fish. The clinical picture resembled a myasthenia or a polio-encephalomyelitis. There were no prodomata such as fever, vomiting or diarrhea. Almost all the muscles of the body were involved, but especially those supplied by cranial nerves, including the oscular muscles and those of speech, mastication and deglutition. The upper extremities were affected more than the lower; the paralysis developed in the course of several days, proceeding from above downward. There was no disturbance of sensation, of intellection, of bladder or rectum. A gradual return of muscular power occurred after several months.

Peritoneal Grafts of Echinococcus.—It has been shown that daughter-vesicles placed free in the peritoneal cavity are capable of forming attachments, of developing and of reproducing themselves. The liquid contents of the hydatid cyst alone are incapable of forming or of causing the production of a new cyst; they acquire this power only when they contain formed elements, either scolex or proligerous vesicles. Engrafted hydatid cysts rapidly acquire an endothelial covering and thus become secondarily extraperitoneal. The practical bearing of these facts is pointed out by M. GUIBÉ *(La Presse Méd.,* Aug. 28, 1901). They explain the occasional inoculation of the peritoneum in the course of surgical intervention. They constitute an argument against puncture in the treatment of hydatid cysts, for during or after puncture inoculation of the peritoneum may readily result from the escape of cyst-contents. They indicate clearly the most careful surgical treatment with as careful protection of the operative field as when an abdominal collection of pus is opened.

Action of Proteolytic Enzymes on Bacterial Toxins.—It is a well-estabished fact that many bacterial toxins when ingested by the mouth lose their toxicity. It is, however, not clear whether these toxins are neutralized by the enzymes or digested by them. This question is of fundamental importance in ascertaining the chemical nature of toxins for if these are simply neutralized they may be of a non-proteid composition, while if they are digested they are in all probability proteids. E. R. BALDWIN and P. A. LEVENE *(Jour. Med. Research,* July, 1901) have investigated this question in a series of studies in which they submitted toxins to the action of the proteolytic enzymes pepsin, trypsin and papain and subjected the resulting products to animal inoculation. They limited their researches to diphtheria and tetanus toxins and tuberculin. The first two are digested and not neutralized by each of these three enzymes. In regard to tuberculin the matter is more complicated. In a general way trypsin and pepsin digestion weaken the specific activity of tuberculin and trypsin on long action can destroy all its power while this result cannot be accomplished by pepsin. They hence feel justified in the conclusion that tuberculin is a nucleo-proteid, since these are more easily destroyed by trypsin than pepsin.

Protracted Influenzal Pneumonia in Infants.—While no period of life is exempt from influenza, it has been observed, during the pandemics of grippe that have encircled the world, that infants are in a high degree immune. Nevertheless four infants, suffering from protracted pneumonia of influenzal origin, were observed simultaneously in one institution, according to F. X. WALLS *(Jour. Amer. Med. Assoc.,* Aug. 31, 1901. In the presence of an influenza epidemic, with evident infection of other members of the household, the probability that a serious illness in an infant was influenza would suggest itself. The following diagnostic feature of grip pneumonia would be included: Sudden onset, mild intestinal symptoms, evidences of inflammation of the upper respiratory tract, sharp elevation of temperature and highly irregular course of fever, with physical signs of a lobar pneumonia and demonstration of Pfeiffer's bacillus. Prognosis should be guarded. The frequent occurrence of tuberculosis as a sequel should be kept in mind. Cases must be treated on general principles; so far as room-temperature is concerned, Walls recommends 80° to 85° F.—a temperature above that advised in ordinary pneumonias.

Indications for Gastric Surgery.—Concerning when to operate on the stomach, O. J. KAUFFMANN *(Birmingh. Med. Rev.,* Aug., 1901) expresses himself as follows: (1) Cases of perforation of the stomach which preclude that the general texture of the wall of the stomach is not greatly altered and that the perforation is small and recent are suitable. (2) For gastric ulcer with severe acute symptoms, even if recurrent, operation is inadvisable. (3) In atonic dyspepsia, if cancer is suspected but cannot be felt, the indication is so uncertain that rigorous diet, lavage, rest and medication should be given a thorough trial. (4) Where cancer is suspected, though not

palpable, and where anemia is beginning and progressing, exploratory laparotomy is advisable if the general condition permits. (5) Where cancer is improbable and where simple fibrous stricture or pyloric spasm is suspected, operation should be undertaken only if the weight falls progressively in spite of treatment.

Varieties of Diphtheria Bacilli.—The diagnosis of diphtheria by the examination of cultures necessitates the recognition of the bacillus by its microscopical appearance and the treatment and isolation largely depend upon the ability of the bacteriologist to so determine the presence or absence of this organism. Variability in form and staining reaction is one of the most striking characteristics of this bacillus. The questions arise, Can we identify this organism by its morphology alone? Is there a pseudodiphtheria bacillus? Has the susceptibility of the patient any influence upon the morphology of the organism? Is there any relation between the microscopical form and virulence? FREDERIC P. GORMAN *(Jour. Med. Research,* July, 1901) attempts to answer these questions by the means of experimental research. He examined 2,375 cases of which 431 showed diphtheria-like bacilli. The cultures were made on Loeffler's blood-serum, incubated for twelve to twenty-four hours, and the organisms were stained with Loefler's methylene blue. He confirms Westbrook's statement that the granular types are most predominant at the onset of the disease; but that they give place wholly or in part to barred or solid types shortly before their disappearance. Sometimes solid types may be replaced by granular types when convalescence is established shortly before the throat is cleared of this organism. The diphtheria-like organisms are more frequent in the nose than in the throat. There are diphtheria-like organisms present in the nares and throats of a large percentage of apparently healthy individuals. The change from granular or barred to solid types seems to take place under the influence of the body fluids of a person immune or becoming so. The virulence seems to be correlated with the morphology. So-called pseudodiphtheria bacilli are morphological varieties of the diphtheria bacillus and are sometimes capable of producing clinical diphtheria, but are not usually pathogenic for guinea-pigs. We cannot tell whether the solid types are able to regain their virulence when once they have lost it, but this seems probable. Neisser's stain is of no value in differentiating barred or solid types.

Psychoses of Influenza.—The various psychical disturbance having influenza as their cause may occur in persons hitherto of normal mental condition, says H. S. UPSON *(Cleveland Jour. of Med.,* Aug., 1901) when they usually take the form of delirium. Or the subjects may be more or less predisposed to nervous affections, when hallucinatory confusion, acute dementia, mania or melancholia is apt to follow. In the third class the insanity in some form is already in existence, but latent, and an exacerbation is evoked by the grip. Of the various deliria, the initial one is the most interesting in that it is often sudden and unexpected in onset and that it may appear with very mild attacks. Febrile and collapse deliria come later in the disease and are more common with the severer types. Acute hallucinatory insanity has strong points of resemblance with delirium on the one side and acute mania on the other and the hallucinations have a tendency to be of a horrific character. Acute mania and melancholia do not differ from those of other diseases; the same may be said of delirium tremens, which greatly enhances the danger of heart-failure. The general depression which follows grip deserves careful study and the languor, rheumatic pains and indefinite aches make rest almost intolerable. The prognosis in these psychoses is generally good, especially if the patients are not previously neuropathic.

Cardiac Lesions of Influenza.—It has been the experience of L. W. LADD *(Cleveland Jour. of Med.,* Aug., 1901) that next in importance to the pulmonary complications of influenza, the cardiac disturbances are to be rated. They frequently are purely neurotic in the form of tachycardia, bradycardia or arhythmia, but extreme cardiac failure and cardiac dilatation are not rare. The latter may be due to the action of the influenza toxin upon the nervous mechanism of the heart, it may be a true toxic myocarditis or dilatation may occur with conditions interfering with the outflow of blood. Ordinarily the dilatation is transitory and no permanent defect remains, but occasionally acute dilatation with sudden death supervenes. Pericarditis, while rare, is more frequent than endocarditis and in most cases pyogenic cocci have been found culturally. Acute aortitis has been reported several times.

Stenoses of Nose Affecting Distant Functions.—Several unusual cases are reported by W. P. PORCHER (*N. Y. Med. Jour.,* Aug. 31, 1901) showing how interference with the nasal passages may reflexly as well as directly affect the functions of the ear and throat. A small osteoma was removed from the septum of one case to relieve partial deafness for which no other cause could be found. The hearing was improved and a cough from which the patient had suffered for five years entirely disappeared. The removal of an hypertrophied turbinate bone in one case and a nasal polypus in another resulted in marked improvement of the sense of hearing in both cases. He quotes a number of good authorities to show what a close connection there is between the mucous membrane of the nose and the female genitalia. Several cases of marked dysmenorrhea have been entirely cured by cauterization of the four genital spots in the nose, and he suggests that in obscure cases of dysmenorrhea, purely neurotic cases due to reflex stimuli from the nose, may be separated from mechanical and organic obstructions to the menstrual flow by thoroughly cocainization of these genital points during an attack and observing the results.

Yellow Fever in Havana.—During the last three years only, there has been an accurate ac-

count of the number of cases of yellow fever in Cuba, but the disease has been about equally prevalent each year and very little progress had been made against it until more sanitary methods were introduced by the Americans. W. C. GORGAS (*Med. Rec.*, Sept. 7, 1901) gives a history of the disease in that locality, showing that it begins to appear soon after the first of April and slowly increases until it reaches its height in July and then decreases during the fall and winter. During the last three years the number of deaths has much decreased and only two have occurred thus far this year. The methods of sanitation are founded upon the belief that the mosquito is responsible for conveying the disease and every effort is made to destroy favorable breeding-places for these insects. The city is closely inspected, all cesspools drained, and no stagnant water is allowed to stand unless protected by mosquito-proof netting. Coal oil is used freely upon all water which cannot be drained away, and the results which have attended the efforts made are most satisfactory and encouraging.

Conservatism in Pelvic Inflammations.—In conducting a series of microscopical examinations of the Fallopian tubes removed by operation, J. L. ROTHROCK (*St. Paul Med. Jour.*, September, 1901) was struck by the slight changes which had occurred in these structures. He advances a plea for greater conservatism in such conditions. Many attacks of pelvic inflammation do not reach the stage of suppuration. Indeed, at the Leipsig Frauenklinik, but 4 per cent. of all the cases terminated thus. In patients operated on there was a relief of symptoms in only 33 per cent., while the remainder underwent the same sufferings after as before the operation. Even in the so-called successful ones, the neurotic tendencies superinduced by the removal of the ovaries became sources of grave danger. The author therefore experimented upon a great many cases in his practice with a view of determining the necessity or otherwise of radical operation. His treatment consisted chiefly of local measures. After removing the mucopurulent secretion from the cervix, daily irrigation of the uterine cavity is practised with bichloride of mercury, 1-5000, or with permanganate of potash, 1-1000, following with an application of ichthyol, 50 per cent., in glycerin; or formalin 25 per cent. Should the os be stenosed which often happens in multiparæ, the cervix must first be dilated. It is absolutely necessary that the os should be patulous in order to secure free drainage. In cases where localized peritonitis is present, the patient is first placed in bed, an absolute rest is essential. Cold or hot applications to the abdomen and antiseptic douches are at this stage the only treatment. After subsidence of all pain and fever local treatment is begun. The duration of such local treatment embraces a period of from six to eight weeks. In cases in which the early treatment has been neglected, the outlook is not so encouraging. Should pus have accumulated, drainage *per vaginam* is much safer than the other route. It may be remarked that Kroenig of Leipsig has stated that in 90 per cent. of his cases, treated by the expectant method, the results were so favorable that subsequent treatment was unnecessary.

A New Continued Fever.—An epidemic of about sixty cases of a disease manifesting itself by a rapid onset, chilly sensations, increasing temperature, irregular pains and mental depression has been reported by E. J. SPRATLING of Georgia (*Med. Rec.*, Sept. 7, 1901). The temperature frequently ran up to 104 to 106°F. It resembled dengue in many particulars, but was too variable in its mode of onset. In dengue whole families are usually affected; in this, rarely more than one. The symptoms lasted only from two to five days and then rapidly subsided. The patients would "feel fine" afterward and "could get up if only stronger." The erratic fever usually persisted for three to five days longer. Prognosis was good when the heart was not affected. The author believes this to be a close congener of, if not actually, Mediterranean fever.

Menthol in Gastritis.—The uses of menthol in acid dyspepsia are described by G. E. CAMPBELL (*St. Paul Med. Jour., Sept.*, VIJV). He used the drug in stomach troubles characterized by gastrodynia, distention, eructation, cardiac distress and vomiting. The object in these cases is to neutralize the hyperacidity and relieve the hypersensitiveness of the organ. The author uses for this purpose menthol combined with bicarbonate of sodium before meals and pepsin after meals. Menthol given in ⅛- to 2-grain doses one-half hour before meals relieves the distressing pain, and has given by far the best results in these cases.

The Influence of Auditory Lesions on Galvanic Vertigo.—If the electrodes of a galvanic current be applied to opposite sides of the head the subject becomes dizzy; the head and upper part of the trunk incline toward the side to which the anode is applied. According to J. BABINSKI (*Soc. de Biol.*, 1901, No. 4) the inclination of the head produced by the galvanic current is, in cases of ear trouble, toward the diseased side. Babinski regards the vertigo which occurs as the effect of electrical stimulation of the labyrinth. His observation is of possible value in fixing the diagnosis of doubtful cases of ear disease with involvement of the labyrinth.

The Specific Treatment of Tabes.—A protest against the introduction of a rigorous antisyphilitic regimen in all cases of tabes, regardless of the individual history, is made by K. v. KETLY (*Orvosi Hetilap.*, No. 2, 1901). In the presence of other evidences of syphilis, antiluetic treatment should be begun at once; but where there are no other signs of an active syphilitic infection and the etiology is based on historical data, mercury should only be resorted to provided the tabes is in its early stage and the patient is in good condition. In advanced tabes the weak-

ness of the patient is intensified by specific treatment. In early cases where syphilis is merely suspected, specific treatment may be tried, but should be discontinued if it proves ineffectual or if troublesome symptoms arise. Tabes itself, according to this writer, is not cured nor directly affected by mercury. Our efforts should be directed toward increasing the vital resistance of the organism, and toward modifying symptoms. Patients must avoid physical and mental strain, exposure to cold, excesses *in Venere* and *in Baccho*. Moderate exercise is advisable. Internally v. Kétly recommends silver nitrate in pills. In syphilitic neuralgia potassium iodide is invaluable. Faradization and galvanization, and hydrotherapy, are useful factors in treatment.

THERAPEUTIC HINTS.

Measles.—Confine patient to bed in room at 65° F. and if cough is hard and irritating have a croup-kettle to keep the air moist. The diet may be milk diluted with barley-water or seltzer or in mild cases sops or light puddings may be allowed. Frequent spongings with warm water containing tar-water relieve the itching and tend to bring out the rash. Demulcent drinks, such as barley-water, lemonade, black-currant or tamarind drinks or jellies will allay irritating cough. During the pre-eruptive stage, with high fever, restlessness, cough and frequent pulse, small doses of tincture of aconite will give relief. During convalescence great care should be taken to prevent catching cold, as such a complication may produce serious results. When there is scant rash, congestion of internal organs, high temperature and bronchopneumonia, the skin must be made to work actively by tepid sponging, hot packs, or mustard baths. A child under two years may be placed for three minutes in a bath at 100° F., containing one tablespoonful of mustard to a gallon. In older children, the hot pack is preferable. In the early stages tartrated antimony, gm. 0.0005-0.001 (gr. $^1/_{120}$-$^1/_{60}$), with tartrated soda or citrate of ammonium, should be given every three or four hours unless there be nausea; whisky or brandy should be given if the pulse is small and rapid, or the tongue brown and dry. Excessive bronchial secretion requires ammonia, digitalis and alcohol. In severe cases the eyes, nose and mouth should be bathed in warm water and carefully looked after. During convalescence no medicine answers better than nitric acid and bark.—ASHBY and WRIGHT in "Diseases of Children."

Hot Air.—Although moist temperatures of 125° to 150° F. cause a distinct burning of tissues, and are bearable for a short time only, nevertheless the same temperature free from moisture, writes O. S. WIGHTMAN (*N. Y. Med. Jour.*, Aug. 17, 1901), may not only be borne with comfort, but with positive sensations of relief. The part to be baked, having been washed and thoroughly dried, is wrapped in soft absorbent material which will absorb the moisture that collects on the surface. Light blankets, rough toweling or heavy cotton-batting may be used. The part is then placed in the oven. If in pain the first sensation is that of needles pricking, but this soon gives way to a feeling of comfort. The physiological action of dry heat consists of a rapid dilatation of the peripheral arterioles, followed by flushing or mottling. In the heavy parts there is a local stimulation of glandular secretion. In sluggish ulcers, cell-growth is stimulated. The heart's beat increases from ten to twenty-five a minute and the respiration from two to six. The kidneys are much relieved of congestion, though immediately after treatment there may be a decrease of fluid and solid constituents in the urine. After an hour's exposure, the mouth temperature rises from two to five degrees. Of the nerves, there is primary stimulation of the vasoconstrictors, then of vasodilators, and, finally, a desire to sleep. The cases suitable for treatment are sprains, synovitis, contusions, traumatic inflammations, edema following fractures, acute and chronic nephritis, anasarca, dropsy, and, above all, gout and rheumatism. Other diseases reported as benefited are suppressed menstruation, pleurisy, bronchitis, ulcers, skin lesions, and various neuroses. In connection with heat, too much stress cannot be laid on the value of massage, except in acute inflammations, and in all cases constitutional treatment should not be neglected. The advantages, then, of dry heat are as follows: It relieves pain without depressant effects, stimulates rapid repair, absorption, and elimination, and acts as a sedative to the nervous system beyond every other agent.

Gelatin in Hemorrhage.—The use of circulatory stimulants and vaso-constricting styptics, such as ergot or suprarenal extract, to check internal hemmorrhage, is directly opposed to Nature, writes H. C. WOOD, Jr. (*Merck's Archives*, Aug., 1901). Gelatin is practically insoluble in cold water, but freely in hot, and if over 2 per cent. it solidifies on cooling. If the solution is maintained at a temperature above 110° C. (230° F.) it loses the property of jellying. Weak salines cause comparatively little change in the jellification. A five-per-cent. solution of gelatin in physiological salt solution made the urine of a dog solidify on cooling, and the blood from the dog coagulated almost instantly, the coagulation being a true clot, and not a jelly. In studying anti-coagulants, gelatin was successful in making the blood clot only in the presence of peptone anti-coagulants, as propeptone. As a local stypic, in menorrhagia and metrorrhagia, hematemis from gastric ulcer, hemorrhoids, etc., it has proven of great value. But as an internal remedy in hematuria, hemoptysis, purpura hæmorrhagica, hemorrhage following operations on the icteric, etc., it has also been found to have a value possessed by no other drug. The total amount injected should be from gm. 1-5 (gr. xv-lxxv). Locally it is used in 10-per-cent. solution.

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SATURDAY, SEPTEMBER 21, 1901.

THE PRESIDENT'S CASE.

PRESIDENT MCKINLEY died at two o'clock on the morning of Saturday, September 14th, seven and a half days after his injury was received. Up to and including most of Thursday, the sixth day after the injury, he had apparently been advancing steadily toward recovery; his temperature had fallen below 100° F., his abdomen was soft and painless and he had taken liquid food by the mouth with relish, but his pulse remained at a little above 120, and on Tuesday some of the stitches had been removed from the incision for the relief, as stated, of a slight infection thought to have been caused by a piece of the shirt carried into the wound by the bullet. His recovery was predicted by those in attendance and by many other physicians interviewed by the papers in various parts of the country, and the prediction seemed amply justified because he had passed the period during which the habitual causes of death after such an injury and operation manifest themselves.

But on Thursday a notable weakness of the heart appeared; it was thought to be due to indigestion, and a laxative was given. Early in the morning of Friday the weakness recurred in an alarming way and persisted, with some intervals of slight improvement under stimulation, until his death twenty-four hours later. Death came quietly after six hours of unconsciousness.

A brief official note of the autopsy, made nine hours after death, was promptly published, and has been followed by informal but apparently authorized statements giving additional details by some of the attending surgeons.

The official account of the autopsy is as follows:

"The bullet which struck over the breastbone did not pass through the skin and did little harm. The other bullet passed through both walls of the stomach near its lower border. Both holes were found to be perfectly closed by the stitches, but the tissue around each hole had become gangrenous. After passing through the stomach, the bullet passed into the back wall of the abdomen, hitting and tearing the upper end of the kidney. This portion of the bullet track was also gangrenous, the gangrene involving the pancreas. The bullet has not yet been found. There was no sign of peritonitis or disease of other organs. The heart walls were very thin. There was no evidence of any attempt at repair by Nature, and death resulted from the gangrene, which affected the stomach around the bullet wounds, as well as the tissues around the further course of the bullet. Death was unavoidable by any surgical or medical treatment and was the direct result of the bullet wound."

The unofficial statements are somewhat conflicting as to matters of fact and opinion. Dr. Wasdin is reported as saying:

"I have seen many gangrenous cases, but none in which the parts lacerated by the bullet were so completely and uniformly affected. The entire tract of the wound from the outer surface of the abdomen, through the tissue, fat, stomach, and abdominal cavity back of the stomach was thoroughly and completely gangrened.

"The wound in the posterior wall of the stomach was particularly affected, the gangrene extending for a radius of almost two inches around the sutures.

"I have never seen such a condition. When the stomach was removed the tissue bore no resemblance to human tissue, and, in fact, was as bloodless as, and much resembled, a piece of clay.

"On Tuesday it was decided to open the external wound in the abdomen. There had been some irritation there, and we decided to find out the cause. At first we took out a few of the stitches and, later, laid open the entire incision, leaving an opening in this wound five inches long and three inches deep. It required no effort to open the incision. We immediately found in the track of the bullet through the flesh and fatty tissue that gangrene had developed. None of the parts other than those around the immediate

bullet wound were affected. We removed this affected tissue, cleansed the wound and closed it."

Dr. Wasdin attributed the gangrene to "some powerfully corrosive poison" introduced upon the bullet, and added: "My belief that the bullets were poisoned is strengthened by the fact that the wound in the breast, although very slight, had gangrened when the autopsy was performed."

Dr. Park, in an interview said to have been written out in his presence, says:

"There is no reason to believe that poison was introduced into the wounds. The gangrene was caused by the secretion of the pancreas escaping from the wound and producing the trouble. The pancreas was perforated by the bullet. There was no way in which we could determine from outward evidences that gangrene had set in. There are no indicative symptoms."

"Is it not a fact, Doctor, that when the surface wounds were opened Tuesday it was found to be affected by gangrene, and that the affected portions were then removed?"

"No, Sir; it is not. There was merely an irritation, and we found nothing that indicated the presence of gangrene. Even at the autopsy it was discovered that gangrene existed only along the track of the bullet from the posterior wall of the stomach to the kidneys. The wound in the anterior wall of the stomach was but very slightly affected."

Dr. Mann says:

"No. The only parts in the abdominal cavity penetrated or touched by the bullet were the stomach walls and the top of the kidney. The pancreas was not touched, although it was involved in the gangrenous process. I was surprised, in fact astounded, at the condition of the internal organs revealed by the autopsy. In all my experience I have never found organs in such a state; to use a vulgar phrase, they were rotten."

Dr. Mynter says that the pancreas was not wounded and that no gangrene was observed along the course of the bullet through the anterior abdominal wall when the incision was opened on Tuesday. Both he and Dr. Mann declare themselves unable to account for the extensive gangrene.

Of these differences as to matters of fact, the one concerning the presence of gangrene in the parietal incision may be dismissed as simply due to a difference of definition. Something must have been wrong there, or the sutures would not have been removed. Whether that was an "irritation," as Dr. Park calls it, or a superficial necrosis along the track of the bullet, it could not have affected the result, and its sole significance is in its possible bearing upon the cause of the extensive gangrene observed elsewhere.

Much the same can be said of the asserted and denied wounding of the pancreas. It is asserted by one, denied by three, and not mentioned in the formal report. Probably, therefore, it did not exist or was slight.

There remains the extensive gangrene, which is affirmed by all and which was undoubtedly the cause of death, and the question of its origin. Two theories have been advanced, (1) that it was due to a poison conveyed by the bullet, and (2) that it was due to the action of pancreatic juice that had escaped from the wounded gland. The second theory seems untenable because similar action is not described as occurring after other wounds involving an escape of the pancreatic juice, because the gangrene involved parts (the anterior wall of the stomach), which the escaping juice could not have reached except after having passed by other parts which were not similarly affected and because it appears to have been a necrosis, a death in bulk, rather than a progressive digestion. And this view is reinforced by the fact that as the patient had been fed for the first four days exclusively by the rectum, the pancreas had not been stimulated to functional activity.

The other theory, that of a poisoned bullet, is warmly urged by Dr. Wasdin. In the absence of specific proof, such as may yet be furnished by bacteriological or chemical tests of the tissues and of the other bullets, it seems as unlikely to be correct as the other. The author of the theory admits his inability to name a poison that would produce such an effect, and the two poisons recommended in the Anarchist manual of assassination, curari and verdigris, are incompetent to produce it. We must therefore await the results of the investigation said to be now in progress. If sloughing existed, as asserted by Dr. Wasdin, beneath the unbroken skin of the breast, where it was struck by the other bullet, it cannot be explained by either theory.

The gangrene, extensive as it was, seems to us not so different from others observed under analogous circumstances as to require the assumption of exceptional causes for its explanation. Necrosis of tissue in a thinner or thicker cylinder along the track of a bullet is thought to be the rule, and ordinarily it is easily taken care of by liquefaction and ab-

sorption. And necrosis, even of considerable extent, in feeble patients, about a sutured wound is certainly not unknown even if rare, and is explained by interference with the local circulation either by tension or by the spread of coagulation within the blood-vessels. It has not been made known to us whether this was a septic or an aseptic necrosis, but it was presumably septic, since the parietal wound presented symptoms, due apparently to the same process at that point, which necessitated the removal of the sutures.

In either case, and especially in the former, the spread of the process in a patient of low reparative power would not be so very exceptional or surprising. Was the President such a patient? Apparently he was. According to Dr. Wasdin, when the incision was reopened toward the end of the fifth day "no effort" was required to open it throughout its entire length, although only the track of the bullet was affected. That expression would hardly have been used unless he had intended to indicate that the amount of repair usual after that lapse of time had not taken place. Then, the President was fifty-eight years of age, had led a sedentary, laborious, and anxious life, and had a complexion and appearance which for some years had been commented upon as indicative of impaired vitality.

It is evident that the surgeons, notably Drs. Mann and Mynter, with whom the first decision lay, acted with commendable promptitude and courage in undertaking the operation, and showed excellent judgment in its course and skill in its execution. They did all that could properly have been done and nothing that should have been left undone. The usual causes of death after such injury and operation were escaped or removed or prevented, and their patient succumbed to a complication which is so rare that it could not reasonably have been anticipated and could not have been averted. The President died because he could not carry on the processes of repair, and because the effort to do so was more than the vitality of the tissues involved could support. This, of course, excludes the possible presence of poison brought by the bullet or of destructive action by the pancreatic juices. If either of those was a factor, it needs only to substitute it in the statement for the assumed defective vitality of the patient. Whatever cause acted, it was unrecognizable at the operation and uncontrollable then or subsequently.

There has been some criticism of the confident assurances of recovery made by those in attendance after the fifth day. To us the progress of the case up to that time appears fully to have justified those assurances and the public anxiety to have required them. The habitual causes of death had been escaped, and recovery could be prevented only by some rare complication which there was no reason to anticipate. The only irregular symptom was the frequency of the pulse, and that could be reasonably accounted for without invoking conditions that endangered life. There was not the slightest nausea, no complaint of discomfort, not the least abdominal pain; a soft abdomen in which percussion and firm pressure disclosed no sensitiveness; the bowels acting; the tongue clearing; the temperature falling; and a cheerful mind. Who can think that with such conditions on the sixth day the surgeons were not fully justified in believing that recovery was assured and, believing, in saying so? That a rare and at that time wholly unindicated complication should have then intervened was their and our misfortune. They did their work skilfully and judiciously, their behavior was dignified, restrained, and worthy of the best traditions of the profession, and they had the misfortune, when success seemed to have been secured, of seeing it overthrown by a complication which could not have been foreseen or avoided. They deserve our admiration and sympathy, not our criticism.

MEDICAL RESEARCH AND REGULATION IN THE PHILIPPINES.

THE United States Government has recognized the needs of medical research in the tropics and the advantage of a health department for the protection of its citizens. It has therefore created two institutions meant to fill these wants, a Government laboratory and a board of health.

Under the term of the Government laboratory there is to be a biological laboratory, a chemical laboratory, and laboratories for the production of vaccine virus and of serums and prophylactics will be established and maintained by the Government of the Philippine Islands. The biological laboratory will be situated at Manila, and will afford adequate facilities for investigation into, and scientific report upon, the causes, pathology,

and methods of diagnosing and combating the diseases of man and of domesticated animals, and of animals utilized for food, and of plants useful to man, as well as for such other biological work as may be deemed necessary by the Board of Health for the Philippine Islands, the Forestry Bureau, the Bureau of Agriculture, or any other department or bureau of the Government.

The chemical laboratory will be situated at Manila, and will afford adequate facilities for investigation and report as to the purity of foods and drinks; as to the composition and properties of gums, resins, drugs, herbs, or other plant products of known or supposed commercial value; as to soils or fertilizers; as to minerals and minero-medicinal waters of the Philippine Islands, and for such other chemical investigation as may be deemed necessary by the Board of Health for the Philippine Islands, the Department of Public Instruction, the Forestry Bureau, the Mining Bureau, the Bureau of Agriculture, the Customs Service, or any other department or bureau of the Government.

Laboratories for the production of vaccine virus and of serums and prophylactics will be established and maintained at Manila and at such other points in the archipelago as the Board of Health for the Philippine Islands may advise and the central legislative body of the Islands may determine upon.

There will be a superintendent of government laboratories, at a salary of $4,000 per year. He will have charge of the construction and equipment of all Government laboratories for the Philippine Islands and of the purchase of all apparatus, supplies, and books which may be authorized for use in connection with such laboratories.

With such an ample provision it is evident that some valuable results can be obtained. We further congratulate the Government in its choice of the Superintendent, Dr. Freer of Ann Arbor.

The Insular Board of Health is also founded on broad lines and has had conferred upon it the powers of a modern municipal health department.

SUCCESSFUL PHOTOTHERAPY.

THE recent award to Prof. Finsen of Copenhagen of one of the magnificent Nobel prizes (its value is over $50,000), established by the will of the great Danish manufacturer of dynamite, recalls the attention of the medical world to Finsen's successful researches in the domain of light therapeutics. It is fortunate, for in the multitude of claims on medical attention, sometimes the really good things are for a time at least crowded out of sight. Prof. Finsen's work, accomplished with patient scientific carefulness and modestly given to the medical world with none of that blare of trumpets that has so often of late accompanied less deserving and successful effort, fully merits the reward and the renewed attention that will be given to it as a consequence.

Prof. Finsen's researches into the effect of light on human beings began with the investigation of the influence of light in smallpox. Only parts of the body, as the face and hands, that are exposed to the action of light during the course of the disease become disfiguringly pitted by smallpox. All the methods of treatment suggested for smallpox, before Finsen's investigations, that had any measure of success in the prevention of pitting had this in common—they kept the hands and face of the patient more or less thoroughly protected from light. This was accomplished in various ways, mostly without any direct intention of light occlusion on the part of the inventors, but, fulfiling this purpose unfailingly. Prof. Finsen then protected a series of smallpox cases from the light and showed that this method of treatment sufficed in practically every case in which it was begun sufficiently early in the disease to suppress the secondary suppurative stage of the disease and consequently to prevent all danger of pitting. It is almost needless to say that it is the secondary fever of smallpox which constitutes the most serious period of the disease. It is at this time that the vast majority of the deaths from the disease take place and that consequently Prof. Finsen's treatment, far from being only cosmetic in its effects, saves many lives and much suffering.

Finsen was thus encouraged to investigate further into the action of light upon the skin. He found that the harmful effects of light were all due to the rays from the violet end of the spectrum. The light rays that affect a photographic plate, some of them beyond the violet in the spectrum, and so producing no sensation of light for human vision, are also active factors in the production of irritative skin conditions. For the successful treatment of smallpox cases it was only necessary, then, to exclude the violet and related rays of light by means of dark-red glass. This discovery has been confirmed by many observers and especially in our present smallpox conditions deserves more serious attention.

Finsen's researches were appreciated by his fellow-countrymen better than is usually the case. He was enabled to continue his investigations into the possibilities of preventing the harmful action of light in disease and using it as a direct therapeutic agent by the generous erection for him of a Light Institute in Copenhagen. He knew that light was a bactericide. His investigations in smallpox showed that the action of light penetrated well beneath the superficial layers of the skin. In variola the light injured the cutaneous cells more than it did the microbic cause of the disease, but it might well prove that in other diseases, the bacteria would be destroyed without serious injury to the skin. Finsen tried the action of concentrated light upon lupus patients and found that it produced a cutaneous reaction that was followed by the cicatrization of the lupus nodules. He continued his observations for several years and convinced himself of the absolute certainty of his results before he gave his conclusions to the public. His communication was considered to be one of the most valuable practical contributions to dermatology in the last decade of the century.

Finsen experimented with the action of light in other diseases, but without as much success as in lupus vulgaris. Lupus erythematosus was sometimes favorably influenced by phototherapy, but sometimes it was not. If the disease is due, as is thought by many, to the toxin of tuberculosis in contradistinction to its congener lupus vulgaris, which is the result of the presence of tubercle bacilli, then the difference in the effect of light on the two diseases would seem to point to a true parasiticidal action of light in the therapy of lupus vulgaris. This is confirmed by the fact that alopecia areata is always favorably influenced by exposure to concentrated light, for this disease is now very generally considered to be due to the presence of a parasite.

In recent investigations Prof. Finsen has shown conclusively that light, apart from heat, is capable of producing effects in the skin that persist for long periods. Exposure of the arm for twenty minutes to the light of a 40,000 candle-power electric light (the large arc light used for lighting city parks and squares is, according to Prof. Finsen, never of more than 4,000 candle-power) is followed by a severe inflammatory reaction and then by pigmentation that persists for many months. Finsen's patient, modest, successful work deserves the reward that has come to him all unsought. The monetary part of it will doubtless be well employed in furthering the progress of phototherapy. He has gathered around him a band of younger workers who have caught some of his enthusiasm. A recent volume of the Transactions of the Finsen Medicinske Lysinstitut (Medical Light-Institute) gives promise that this new and encouraging branch of therapeutics will receive the due share of careful experimentation that will guarantee its timely development to the fullest possible extent.

SECRET MEDICINAL PREPARATIONS.

AMONG the points in the administration of public affairs in the Old World which claim our admiration is the official control exercised over medical matters. A report of the United States Consul-General at Vienna shows the measures adopted by Austria for the protection of the people of that country. The sale of secret remedies is forbidden and no apothecary is permitted to keep for this purpose any medicinal preparation "of which the prescription is not open to inspection by physicians or in the prescription of which the substance of the medicinal ingredients cannot be definitely recognized as to kind and quantity." Government inspection of all new preparations is required before their sale is allowed, and cosmetics the labels, wrappers, or advertisements of which claim that they are efficacious in removing personal blemishes are absolutely barred. No testimonials from abroad of the cures effected by patent remedies may be published in the local papers.

The wisdom of much official regulations cannot be questioned. It is more than doubtful, however, whether the needful legislation could be secured in this land, where the privilege of being humbugged is claimed as one of the inalienable rights of the citizen of a free country, and where opposition to the acts of others is attributed to jealousy on the part of the medical fraternity. Does not Mark Twain, attempting to depart from the field of humor in which he is frequently successful, complain, "How is it that there are a thousand ways in which I may be permitted to damn my soul, but when it comes to a trivial matter like temporary ill health, the Legislature must prescribe how I shall do it. It is absurd and ridiculous?" The almighty dollar and political ambition are still more serious obstacles. The stand of the powder and shot manufacturers in the crusade against the butchery of thousands of living pigeons in the name of sport illustrates

the difficulty in obtaining legislation which affects the pockets of a large and wealthy class.

And what an outrage to restrict the publication of testimonials—the only means short of violent crime that many prominent citizens of Wayback possess for obtaining publicity! The depth of such an injury is too great to be lightly passed over. There is apparently but one honor which touches a certain type of citizen of uncertain degree of education as keenly as he feels the privilege of being humbugged, and that is the publication of his portrait, name, and an alleged personal testimonial. It is related that a stranger recently approached a man of national prominence and said that he believed he had seen his picture somewhere. Being told that it was quite possible, he asked, "What were you cured of?" The life of the reformer is hard, and the introduction of the ways of monarchies is not considered by Mr. Spate to be easy or a complete success. Public restriction of secret medicinal preparations is almost too much to expect in the near future.

ECHOES AND NEWS.

NEW YORK.

Board of Health Asks More Money.—The Department of Health of New York City has submitted to the Board of Estimate and Apportionment its estimate of the amount necessary for the coming year. While last year $1,053,990 was allowed by the Board, this year an increase of $346,266 is asked for, making a total of $1,410,256.

Summer Milk Depots' Work.—All the regular summer depots of the Nathan Straus sterilized milk charity in New York City close this week. The present season has made greater demands upon the work than any of the preceding nine years of its existence and a greater quantity of milk has been dispensed. There were thirteen depots open during the season, all situated in the poorer districts of the city, where the need was greatest. There were distributed 770,700 bottles of milk. Besides the bottled milk, more than one million glasses were drunk in the different booths. During the entire winter four depots will remain open.

New French Hospital.—The French Benevolent Society has awarded the contract for the new hospital of the society, which is to be built upon the recently acquired property on Thirty-fourth street, between Ninth and Tenth avenues. The building will be of seven stories, and provide accommodations for one hundred and fifty patients and attendants, besides offices for the association. The society was incorporated in 1819, and the hospital was founded in 1881. It is a non-sectarian institution, and receives no aid from the State.

School for Crippled Children.—The free school for crippled children, 434 West Fifty-seventh street, opened on Monday last with an attendance of forty-six children, the full capacity of the school. Ten of these children are perfectly helpless, but they are brought to and from the school with the others in a wagonette provided by the Woman's Auxiliary to the Guild for Crippled Children of the Poor.

Appointment of Dr. Fischlowitz.—Dr. Gustav G. Fischlowitz has been appointed assistant attending surgeon to the New York Maternity Hospital.

Medical Society of the State of New York.—The Medical Society of the State of New York will hold a semi-annual meeting in Hosack Hall, New York Academy of Medicine, No. 17 West 43d street, New York City, on October 15 and 16, 1901. The titles of papers to be presented are announced as follows: A Contribution to the Pathogenesis of Narcolepsy and other Forms of Morbid Sleepiness, by Heinrich Stern, New York; The Dyspeptic Heart, by James K. Crook, New York; The Official Relation of the Medical Profession to Private Charitable Institution, by Enoch V. Stoddard, Rochester; Cerebral Apoplexy, by Edward D. Fisher, New York; The Causes and Treatment of Epilepsy, by W. P. Spratling Sonyea; Hallucinations: Their Pathogenesis, Clinical Import and Medico-Legal Value, by J. Leonard Corning, NewYork; Note on the Refinement of the Technic of Spinal Anesthesia, by J. Leonard Corning, New York; Tropacocaine in Spinal Anesthesia, by Willy Meyer, New York; Therapeutics and the Drug Manufacturer, by B. W. Loomis, Syracuse; Prolonged Medication, by A. Jacobi, New York; Muscular Atony as the Principal Factor in Uterine Displacements, by Henry C. Coe, New York; A Brief outline of the Surgical Procedure in Tubal Pregnancy, with Report of Case, by H. T. Williams, Rochester; The Treatment of Chronic Endometritis, by Hermann J. Boldt, New York; Some Facts and Fallacies Concerning Pulmonary Tuberculosis, by John H. Pryor, Buffalo; Notes on the Early Diagnosis and Treatment of Pulmonary Tuberculosis, by J. Elwood Stubbert, Liberty; The Association of Pulmonary Tuberculosis with Cardiac Lesions, by J. M. Anders, Philadelphia; Dysmenorrhea, by Matthew D. Mann, Buffalo; Cancer of the Uterus, by William R. Pryor, New York; Abdominal Actinomycosis, with Illustrations and Report of a Case, by Albert Vander Veer, Albany; Old Age as a Factor in the Cure of Hernia, by W. B. De Garmo, New York; Problems in the Management of Tubercular Disease of the Hip, Based upon Records in Private Practice, by Virgil P. Gibney, New York; Mechanical and Oper-

ative Treatment of Hip Disease, and Disease of the Spinal Vertebræ, by A. M. Phelps, New York; The Difficulties Encountered by the Sanitarian in Dealing with Smallpox, by Ernest Wende, Buffalo; The Clinical Symptoms of Advanced Cardiac Disease, of Cases in which the Right Heart is Relatively Most at Fault, by Louis F. Bishop, New York; The Advantages of Stereoscopic Radiography, by L. A. Wiegel, Rochester.

Symposium On Some of the Diseases of the Liver and Bile-Passages: The Diagnosis of Gall-Stones and their Aberrances, by Charles G. Stockton, Buffalo; Courvoisier's Law, by Richard C. Cabot, Boston; The Infections of the Gall-Bladder and Bile-Ducts, M. H. Richardson, Boston; Intestinal Obstruction due to Gall-Stones, L. S. Pilcher, Brooklyn; Technic of Gall-Bladder and Duct Operations, by S. J. Mixter, Boston; Cholecystectomy, by C. L. Gibson, New York; Syphilis of the Liver, by Simon Flexner, Philadelphia; Tumors of the Liver, by G. R. Fowler, Brooklyn.

The Physiological and Clinical Action of Normal Salt Solution, with Indications for Its Use, by W. H. Heath, Buffalo; Medical Aspect of Appendicitis, by N. E. Ford, Utica; Aspiration of Wire Nail, Gangrene, Septic Pneumonia, by Francis Huber, New York; The Etiologic Potency of Heredity in Mental Disease, by Carlos F. MacDonald, New York; The Pathology and Treatment of Migraine, by William H. Thomson, New York; A Few Urinalysis Deductions, by Hamilton D. Wev. Elmira; Method of Incising, Searching and Suturing the Kidney for Stone, by Howard A. Kelly, Baltimore; The Technic of Nephropexy, by Geo. M. Edebohls, New York; Morcellement and Bisection of the Uterus in Complicated Abdominal Hysterectomy, by Willis G. Macdonald, Albany; The Immediate Repair of Injuries of Parturition, by A. L. Beahan, Canandaigua; A Smallpox Epidemic in an Orphanage, by Frederick C. Curtis and H. L. K. Shaw, Albany; Report of a Case of Non-traumatic Perinephritic Hemorrhage, by Arthur Booth, Elmira; Are the Tonsils to be Regarded as One of the Normal Organs of the Body, by F. H. Bosworth, New York; The Early Diagnosis and Treatment of Acute Mastoiditis, by T. H. Halstead, Syracuse; History and Presentation of a Case of Cerebral Abscess Complicating Chronic Otitis Media, by Robert Lewis, Jr., New York; Some Conditions Antecedent to Cancer of the Breast, by B. F. Curtis, New York; Ligation of the Abdominal Aorta for Aneurism, by Robert T. Morris, New York; Observations on the Treatment of Croupous Pneumonia, by J. C. Wilson, Philadelphia; The Clinical Evidence of Myocardial Conditions, by John L. Heffron, Syracuse; A Case of Intermittent Claudication, Terminating in Gangrene, by I. N. Levry, Syracuse; The Present Status of Ophthalmic Science and Art, by D. B. St. John Roosa, New York; The Beneficial Effect on the Eyes from the Use of the Stereoscope, by A. Edward Davis, New York; Glaucoma Simplex and its Treatment, by Peter A. Callan, New York; The Evolution of Typhoid Fever Theories, by Richard Stein, New York.

CHICAGO.

Death-Rate of Children Lower.—The weekly bulletin of the Health Department of Chicago says that there were 483 deaths during the week ended September 7, 1901, this being 32 fewer than during the preceding week, but an excess of 39 as compared with the corresponding period last year. The reduction in the week's mortality, as compared with the week preceding, is due principally to the lower mortality among children under five years of age, the reduction at this division being chiefly attributed to fewer deaths from the acute intestinal diseases, diphtheria, convulsions and infantile marasmus. The continuance of the remarkably low mortality from diphtheria which has prevailed during the Summer months still holds good, there having been but four deaths recorded as due to this disease during the week. With the re-opening of the public schools, however, there has in times past been a marked increase in the contagious disease mortality, especially diphtheria.

Testimonial Banquet to Dr. N. S. Davis, Sr.—The medical profession of Chicago will tender to Dr. N. S. Davis, Sr., the father of the American Medical Association, a testimonial banquet October 5th. Several prominent members of the profession from the outside have been invited to attend, and to make speeches at the dinner, and among them Drs. William Osler, Victor C. Vaughan and John A. Wyeth.

Sterilization of Pencils.—Health Commissioner Reynolds has recommended the sterilization of pencils used in the public schools, and Superintendent Cooley has been asked to submit the matter to the Board of Education. Pencils are distributed at every session and the children habitually put them in their mouths.

Changes at Baptist Hospital.—On account of the resignation of Dr. Reuben Peterson, of the staff of physicians, Dr. Palmer Singley was appointed to fill his place. Dr. Peterson is leaving in order to accept a position at Ann Arbor. Dr. A. E. Halstead and Dr. C. E. Paddock were also appointed members of the hospital staff.

American Academy of Railway Surgeons.—This Society held its annual meeting at the Auditorium Hotel, September 12th and 13th, under the presidency of Dr. D. S. Fairchild of Clinton, Iowa. The following officers were elected for the ensuing year: President, Dr. A. F. Jonas of Omaha, Neb.; First Vice-

President, Dr. L. Sexton of New Orleans, La.; Second Vice-President, Dr. Wm. H. German of Morgan Park, Ill.; Secretary and Treasurer, Dr. T. B. Lacey of Council Bluffs, Iowa; Editor, Dr. R. Harvey Reed of Rock Springs, Wyoming; Committee on Program, Dr. A. F. Jonas of Omaha, Neb., Chairman. Place of meeting, Kansas City; time, to be decided by Program Committee.

Incorporation of Christian Hospital.—The Christian Hospital has been incorporated by Dr. Emma M. Moore and others, with a capital stock of $25,000.

GENERAL.

A Royal Nurse.—The Princess Frederick Augusta, daughter of the Grand Duke of Tuscany and heiress to the throne of Saxony, is now taking a regular course of training in the Lutheran Hospital at Dresden. At her own request no distinction is made between her duties and those of the humblest probationer.

King Edward's Health.—Since his accession King Edward has enjoyed rather better health than formerly, but some anxiety is felt concerning his throat despite the assurance that the local trouble is of a very simple nature.

Epidemic of Baldness in Japan.—There was an epidemic of baldness at Chiba last year, and there has been an even more serious one quite recently at Osaka, the same province, where, as it will be remembered, an extensive epidemic of plague prevailed during the winter of 1899 and 1900. The clinical course of the affection under consideration offers many points of interest, and differs eminently both as regards extent and character from the occurrence of sudden baldness after enteric or any other acute fever. For it is stated that during that epidemic of baldness the loss of hair comes after very little, if any, premonitory warning. The bald patches are irregularly spread over the head, but the first large one generally appears on the crown and extends down the back of the head instead of forward toward the forehead; the opposite of the course of baldness as it is known in America. Another point which may be noticed is that most of the victims of the epidemic are women, and more children are attacked than men.

A Fatal Epidemic in Alaska.—The Rev. Father Rene, of the Alaska Catholic Mission, brings an account of a fearful malady which he describes as an apparent combination of cholera and grip that has caused more than three thousands deaths among the Yukon Indians during the past fall and winter.

Artificial Food for Microbes.—One of the chief difficulties in the chemical study of microbes has been the lack of a standard nutritive medium on which to grow them. A number of special media have been devised for particular bacteria, but no universal food substance suitable for the chemical laboratory has yet been obtained. The difficulty has been to provide the nitrogen which they require in a suitable form. At a recent meeting of the French Academy a note was read from M. Charles Lepierre describing a compound which he believes fulfils many of the requirements of such food. This is mixed with glycerin and small quantities of common salt, magnesium sulphate, calcium glycero-phosphate and bicarbonate of potash. With this mixture M. Lepierre has raised forty-five different microbes, twenty-two of which were pathogenic. Among the latter were the typhoid and cholera bacillus.

Doctor's Winged Messengers.—Dr. Gould, of Rockland, Maine, has a loft of homing pigeons. In practising his profession upon the islands adjacent to his coast, it sometimes becomes necessary to make tiresome and even hazardous trips in small boats. To avoid the unnecessary repetition of these he has fallen upon the plan of leaving pigeons at the homes of his distant patients, and by this means can be daily advised of their progress.

Epidemics in Schools.—At Hempstead, Long Island, scarlet fever has made it necessary to close the public school. The disease is very prevalent and attacks persons of all ages. No definite source of the contagion has been discovered, although the milk supply is suspected.—The Lincoln school, situated at Dunellen, N. J., has been closed on account of an epidemic of typhoid fever.

Smallpox in the United States.—Between June 28th and September 15th of the present year there occurred 9,503 cases of smallpox in this country with 265 deaths. During the corresponding period of 1900 there were reported 3,818 cases with 114 deaths. The distribution of the disease appears to be alarmingly general. A very unusual prevalence of smallpox is also reported from London, where it is credited to the neglect of vaccination.

Pecuniary Damages for Smallpox.—Two physicians of Red Bank, N. J., have been sued for ten thousand dollars by a man and his wife, the latter of whom contracted smallpox while acting as nurse to patients of these gentlemen. In the suit the plaintiffs aver that they were assured by the medical attendants that there was no danger of contagion.

A Function for the Appendix.—Dr. Hershey, of Denver, Colo., has advanced the theory that the appendix has a secretory function, serving as a lubricant to the large intestine, and that any interference with the organ brings about other forms of sickness and a multitude of disorders, including fatal constipation. Dr. Hershey will conduct experiments and report on his observations a year hence.

Progress of the Bubonic Plague.—Except on the island of Formosa the plague appears to be under control throughout China and

Japan. In the Philippines, however, a moderate number of cases are weekly reported among the Chinese and natives, although American soldiers are occasionally included among the victims. Deaths are reported in Siam, Mauritius and Cape Colony, while from British India, particularly in the neighborhood of Bombay, an appalling death-rate continues. Constantinople is still infected.

Novelties in Baths.—The mud baths so much in vogue at St. Amand-les-Eaux and elsewhere on the Continent are too well known to be considered new or unusual, but the invigorating effects of the wine bath are not so generally appreciated even by the wealthy. Bathing in milk, veal-broth or the yolks of eggs for the supposed influence upon nutrition is practised from time to time by the eccentric. The snow bath recommended by an athletic member of the Northwestern University at Chicago cannot be accused of having the element luxurious effeminacy which might be thought to characterize those already mentioned. This balneal diversion is only enjoyed in winter and is carried out by its advocates preferably just before retiring. After divesting oneself of all clothing, a longer or shorter time, "according to taste," is spent rolling about in the nearest snowdrift.

The Doctor in Fiction.—It would seem that it is impossible for the novelist to touch upon things medical without falling into error. Mr. Hall Caine, who gave us an impossible nurse in "The Christian," gives us a still more impossible medical man in his last novel, "The Eternal City," which has just been published. In the chapter entitled "The Roman of Rome," he describes how a practitioner examined the breast and axilla of a patient and, finding cancer, declared that a nurse must be summoned immediately. Further on, in speaking of the case, he is made to say that if the diagnosis had been made earlier *nephrectomy* might have saved the patient, but, as it was, the case was beyond surgical aid.

Operation was Necessary.—A distinguished specialist in abdominal troubles in London, speaking about President McKinley's case, said the best surgeons in Europe were unanimous in asserting that the operation was the right and the best thing that could have been done, and that the President would have died in forty-eight hours had it not been performed.

Foreign Comments.—The *British Medical Journal*, discussing the results of the autopsy says it is needless to assign any influence to the escape of pancreatic secretions or to a poisoned bullet, because the mechanical conditions "amply account for all disturbances found." The journal testifies to the high rank of American surgery and says: "Success in such a case would have been a triumph, and defeat is not disgrace."

Nerve Nostrums.—Dr. Wm. P. Spratling, of Craig Colony for Epileptics, Sonyea, N. Y., is preparing, by request of Dr. George F. Butler, Chairman of the Section on Materia Medica, Pharmacy and Therapeutics, of the American Medical Association, a paper on "Nerve Nostrums and Their Dangers" for the June, 1902, meeting of the American Medical Association, and he would be glad to have physicians and others send him any samples or literature of such nostrums coming under their notice, or tell him of them and where they may be procured.

No Dissension.—That certain of the daily papers should have persistently exhibited a disposition to disturb the harmony among the surgeons and physicians connected with Mr. McKinley's case, cannot be regarded otherwise than unfortunate by any who hold in proper respect the dignity and good name of the profession. It is particularly regrettable that any medical man should have lent his name to such efforts. Under the circumstances we are not surprised that the following statement has appeared:

"We desire to say to the press and the public, once for all, that every such publication and alleged interview with any of us containing criticism of one another or of any of our associates, is false and is nothing but scandal mongering. We say again that there was never a serious disagreement among the professional attendants as to any of the symptoms or as to treatment of the case or as to the bulletins which were issued. A very unusual harmony of opinion and of action prevailed all through the case.

"The unfortunate result could not have been foreseen before the unfavorable symptoms declared themselves late on the sixth day, and could not have been prevented by any human agency.

"Pending the completion and publication of the official reports of the postmortem examiners and of the attending staff, we shall refuse to make any further statements for publication, and alleged interviews with any of us may be known to be fictitious.

"MATTHEW D. MANN, ROSWELL PARK,
"HERMAN MYNTER, EUGENE WASDIN,
"CHARLES G. STOCKTON."

Obituary.—Dr. William McKinley, a well-known practising physician and a distant relative of the late President McKinley, was found dead at his home, at Polk, Pa. On Saturday Dr. McKinley was in Franklin, and with much emotion discussed the shooting and death of the late President with friends. He was of a highly nervous disposition and at different times during these discussions he became greatly excited over the assassination. In the evening he returned to Polk and a few hours after his arrival there his dead body was found by a member of the family lying on the ground in the rear of his residence. The phy-

sicians who were summoned said that death was due to apoplexy, brought on by the excitement of the day. Dr. McKinley had an acquaintance with President McKinley, and was one of his warmest admirers. He was a graduate of the Baltimore Medical College and forty-four years of age.

CORRESPONDENCE.

OUR LONDON LETTER.

(From Our Special Correspondent.)

LONDON, Sept. 7, 1901.

A ROYAL COMMISSION ON TUBERCULOSIS—THE COMMISSIONERS—PROFESSOR KOCH AND THE BRITISH COAST.

A THIRD Royal Commission has been appointed for the investigation of the tuberculosis question. This is the direct outcome of Koch's sensational deliverance at the recent Congress. The Commission is to inquire and report whether tuberculosis in animals and in man are one and the same disease; whether animals and man can be reciprocally infected with it; under what conditions, if at all, the transmission of the disease takes place, and what are the circumstances favorable or unfavorable to such transmission. There are five Commissioners, all members of the medical profession, though one of them is a representative of veterinary science. The University of Cambridge is represented by Sir Michael Foster and Professor Woodhead; no other university in the Three Kingdoms is represented. Professor Sidney Martin of University College of London, naturally finds a place on the Commission, as it was largely on his experimental work that the report of the last Royal Commission as to the dangers of the consumption of tuberculous meat and milk was based.

Dr. John McFadyean is our greatest authority in this country on veterinary pathology, and Professor Boyle, of Liverpool, is in the sphere of pathology as "pushful" as Mr. Chamberlain is in politics. Sir Michael Foster is a physiologist, and, as far as I know, has given no special attention either to tuberculosis in particular or to pathology in general. But he is a fine ornamental figurehead, and being at once head and indeed part creator of the medical school of Cambridge, Secretary (which virtually means "boss") of the Royal Society, and a Member of Parliament; he is a personage of great importance. He speaks well, and is really an able man, though he looks at the world a little too much through academic spectacles. Professor Woodhead is an industrious worker, whose name is not associated with any great original discovery; but he is a teacher of very marked capacity and has studied tuberculosis from all points of view for many years. On the whole, it is in a scientific sense a strong Commission, but unfortunately the problems of pathology cannot be solved even by Commissions issued "under the King's Royal Sign Manual." There are among the constituent element on the Commission certain factors which may impair the value of its findings. Thus, one of the Commissioners has already shown that he does not approach the question in that spirit of absolute impartiality which the investigation of a scientific question demands by declaring that the organizers of the Tuberculosis Congress should never have allowed Koch to read his paper!

I see it is stated by a writer in one of your contemporaries that Koch, after shooting his bolt, "evaded the result" by leaving the arena. That is Koch's way. His words are to be accepted with the faith demanded of the subjects of an infallible oracle. But when your contemporary goes on to attribute to disinclination to defend his position, Koch's avoidance of social entertainments and in particular his absence from the group of delegates presented to the King he goes somewhat astray. Koch is, owing to circumstances that need not be referred to, rather an outsider from the social point of view, and it is understood that the German Court did not recommend him for any special attention on the part of Royalty here.

TRANSACTIONS OF FOREIGN SOCIETIES.

French.

THE MENINGOCOCCUS OF WEICHSELBAUM—INTOXICATION BY DYES IN SHOES—METAMERIC ZONE OF THE LOWER EXTREMITY—LEUCOCYTOSIS OF MEASLES—LESIONS IN THE TERMINAL SPINAL CORD FILAMENTS—HYSTERICAL PSEUDOMENINGITIS—THE KIDNEYS AND TUBERCULOSIS—SENSIBILISATRICE IN TYPHOID SERUM—THE BACILLUS TUBERCULOSIS AND THE FECES.

M. LANDOUZY, at the Académie de Médecine, July 30, 1901, read a report on the experimental transmission of the meningococcus of Weichselbaum by the respiratory channels. The meningococcus was found in the mucous nasal discharges of five soldiers who were suffering from epidemic cerebrospinal meningitis. Inoculations with this mucus were made in the nasal cavities of five guinea-pigs and three rabbits. All eight of these animals became sick and five died. In the cerebrospinal fluid of these free meningococci were demonstrated. Again inoculations from the nasal mucus of this set of animals upon an other set resulted in death and the recovery of this meningococcus in pure culture from their cephalorachidian fluid. Likewise the depositing of some of the cerebrospinal fluid from one of the deceased soldiers upon the nasal mucous membrane of a rabbit and three guinea-pigs resulted in causing the same series of symptoms as in the other lots of animals and in the death of two of the guinea-pigs. In the spinal fluid of these the meningococci were again freely present.

M. LANDOUZY also read a communication in the name of M. Lop (Marseilles) relative to a peculiar example of poisoning by dye-stuffs as

employed to color leather. His patient was a young boy who having bought a pair of yellow boots determined to dye them black. The evening of the first day of wearing them he was seized with grave symptoms, cramps in the calves, nausea, vomiting, hypothermia, cyanosis of the face and extremities, anuria, etc. Upon careful investigation it was evident that these symptoms were all due to intoxication by the dye, aniline in character, he had used in coloring his shoes. This observation is analogous to that presented to the Academy by Landouzy himself about one year ago. Together they serve to emphasize the dangers inherent in employing dyes on the shoes and might suggest the propriety of bringing the matter to the notice of the proper authorities.

M. WIDAL, at the Société Médicale des Hôpitaux, July 26, 1901, noted an observation of the metameric zone of the lower extremity in collaboration with M. Le Sourd. The woman was forty-nine years old and the right thigh was affected. The vesicles were arranged for the most part in transverse bands, extended in front from the groins almost to the knee and from the popliteal space almost to the lumbar region behind. Examination of the cephalorachidian fluid demonstrated numerous lymphocytes, just as in the cases reported at a previous meeting by M. Brissaud and M. Sicard. The facts argue strongly for the existence of some medullary changes which involve also the pia mater. Because it is well established to-day that a purly ganglionic change could not produce these changes in the cephalorachidian fluid. Bacteriologically this fluid was sterile, as all inseminations upon culture-media gave no growth.

M. J. GOURMONT (Lyons) addressed a note in the names of Montagard, Pehu and himself relative to the special type of leucocytosis present in measles, with definite reference to distinguishing the rash of measles from that of variola. According to these writers measles is accompanied by a slight hyperleucocytosis, which is augmented as soon as any complications occur, purely of the polynuclear cells. They have not yet observed myelocytes, nucleated red cells nor mononuclear leucocytes. On the other hand the eosinophile cells are decreased in comparison with the normal number for children, which distinguishes the disease from scarlatina, if the observation be true, because scarlatina is manifested by an increase in the eosinophile cells.

M. HIRTZ gave the history of a young man, thirty years old, who died of pulmonary tuberculosis, with decided uremic symptoms, consequent upon an albuminuria. The autopsy showed a large cavity at the apex of the right lung, and the kidneys white, lardaceous and upon microscopical view in a very marked degree of amyloid degeneration.

M. WIDAL and M. Le Sourd, at the Société de Biologie, July 29, 1901, presented a collaboration dealing with the presence of *sensibilisatrice* in typhoid serum. The special point they sought to demonstrate is the day at which it appears in the blood of guinea-pigs, inoculated beneath the skin with a culture of the bacillus typhosus. The method of fixation was that employed by M. Bordet. In two animals the *sensibilisatrice* appeared on the fifth day accompanying the phenomenon of agglutination. In a third animal it preceded the latter by one day. Among the human patients at their disposal they always found the two phenomena, agglutination and fixation co-existing. In not one case were they dissociated and always were present in the earlier days of the disease. In one patient they appeared as late as the sixth day. Otherwise both existed before that time. A dissociation of these two signs can, however, be clinically found. For example in one patient who had fully recovered from a mild degree of typhoid fever, the agglutination property in his blood had disappeared four months after his convalescence, but the fixation property was still present. In another patient who had already had three relapses of the disease both of these signs were beautifully marked, and that of fixation was the most distinct they had yet seen. A dilution of 1-300 still gave agglutination, Yet four days later a fourth relapse took place with all the typical signs and symptoms. Such a fact appears to demonstrate that immunity does not co-exist with the sign of fixation.

M. ANGLADE (Aleneon) stated that he has been investigating the alvine dejections of tuberculous patients and has found them a large avenue for the elimination of the bacillus, alike in those who have pulmonary as in those who have intestinal tuberculosis.

SOCIETY PROCEEDINGS.

HARVARD MEDICAL SOCIETY OF NEW YORK CITY.

Stated Meeting, Held May 25, 1901.

The President, Howard Lilienthal, M.D., in the Chair.

Advance in Knowledge of Gonorrhea.—Dr. Frederick R. Sturgis read a paper on recent advances in knowledge of the pathology of gonorrhea, with special reference to the question whether the disease should not really be considered a constitutional affection with a local manifestation. He said that formerly it was thought that gonorrhea was an absolutely local disease. It was the custom, too, to consider it as a rather mild form of inflammation that ran a definite course and left no serious sequelæ after it. The question of the significance of complications of the disease was not so clear. Serious complications were known not to be rare, though they were considered to be only passing in their effect.

Systemic Infection.—Of late a good deal of material has been accumulated with regard to the systemic involvement in many cases of gonorrhea. Generalized infection means absorption of

septic material from some localized focus containing pyogenic micro-organisms. There is now no doubt in the minds of most physicians that absorption of this kind takes place during the course of gonorrhea and that it produces constitutional symptoms in a goodly proportion of cases.

Manner of Auto-infection.—It has been known for some time that the gonococcus readily attacks circumjacent tissues. It spreads by continuity of tissue as well as by contiguity. It was not thought, however, that it produced generalized infection. It was known that it affected the joints and the eyes, but these processes were called metastatic. Over a hundred years ago John Hunter thought that, as gonorrhea attacked joints, so it also affected the endocardium. His idea met with no general acceptance, however, and Trousseau combated the idea of gonorrhea wandering in this way. About the middle of the century a number of cases were reported that pointed clearly to the fact that gonorrhea might produce a sort of pyemia. It was not, however, until Neisser's discovery of the gonococcus and Bumm's description of the method of cultivating it that any trustworthy investigation could be carried out.

Organs Affected by Gonococcus.—It is now known positively that most of the organs of the body can be affected by the gonococcus. It has been found in the kidney, producing pyelonephritis in the pus of which a pure culture of the gonococcus has been demonstrated. It has been found in the coverings of the brain, producing severe serous meningitis and also purulent affections of the meninges. It has been found in the intramuscular tissues with tendencies to produce abscess. It is well known that rectal infections by the gonococcus may of themselves, or by the secondary infection which they favor, lead to very serious ulcerative conditions of the rectum. Finally, the gonococcus has been found in the spleen, in the periosteum of the bone and even free in the circulation. In a word, no tissue or organ is exempt from invasion by the micro-organism that only a few years ago was considered to limit its ravages to the specialized mucous membrane of the genito-urinary tract and the conjunctiva.

Mixed Infection.—It has often been claimed that the secondary symptoms and complications and many of the sequelæ of gonorrhea are really not due to the gonococcus itself, but to various pyogenic organisms which find a favorable occasion for entrance into the tissue, because of the presence of the chronic inflammatory lesions produced by the gonococcus. The staphylococcus was thought to be the most frequent secondary infective agent and its presence has been shown in a number of these cases. There is no doubt, however, that, while the gonococcus predisposes to secondary infection, it can of itself in pure culture produce serious pyogenic conditions. Prof. Finger of Vienna in 1895 showed that malignant endocarditis may be caused by pure cultures of the gonococcus alone. He demonstrated the presence of the gonococcus on the valves of the heart in pure culture by staining and culture methods.

Subsequent Confirmation.—Within a year or two after the announcement of his discovery, Finger's conclusions in this matter were substantiated by investigations at Johns Hopkins Hospital. Thayer and Lazear demonstrated the presence of gonococci in pure culture in a tricuspid lesion of the heart. A little later Brantford Lewis showed that the only organism to be found in a case of pyelonephritis under his care was a biscuit-shaped diplococcus which had all the characteristics of the gonococcus. It grew well only on urine agar and it conformed to the Gram test. This case had been considered one of malaria, because of the regularity with which the chills recurred from day to day. The patient strenuously denied ever having had gonorrhea.

Secondary Infection.—Dr. Arpad Gerster in a case of septicemia originating in a kidney abscess found staphylococci and gonococci in the kidney pus. It seems easy to explain the presence of gonococci in the kidney by claiming that it spreads by continuity of tissue, the micro-organism finding its way through the bladder and ureter to the pelvis of the kidney. In most of these cases, however, there have been absolutely no symptoms of bladder or ureteral disturbance and it seems more reasonable to suppose that the kidney infection has taken place either through the lymph-channels or perhaps directly through the blood during an effort of the kidney to eliminate the micro-organism from the circulation.

Brain and Spinal Symptoms.—In most of the cases where there have been brain and spinal symptoms, it has not been clear that there was direct infection of any of the structures in or around the nervous system by the gonococcus. Symptoms seem to have been produced either by mixed infection or by the toxins in the circulation absorbed through some focus of gonococci at a distance from the nervous system. In Fuerbringer's case there were distinct epileptic attacks that seemed to be traceable to gonorrheal influences.

Nervous Lesions.—Fuerbringer's case is interesting because it exemplifies exceptionally serious conditions. The patient when admitted complained of pains in his head and abdomen and was restless and sleepless. He was strong and well built, his pupils were dilated and his optic papillæ were found somewhat congested. A short time after admission he complained of a stiff neck and became very restless, wanting to be continually in movement. He had on admission an acute urethritis with a profuse discharge of yellowish purulent material. Lumbar puncture was performed and about 20 cubic centimeters of purulent fluid were evacuated from the spinal canal. In the cells of this purulent fluid diplococci were found resembling gonococci in all bacteriological peculiarities. The patient became comatose and death took place the next day.

Postmortem Findings.—At the autopsy the spinal cord was found surrounded by purulent fluid and the pia mater of the brain was congested with pus. There was marked edema of the nervous tissue and to this evidently most of the nervous symptoms could be referred. Bacteriological examination of the pus obtained after death gave the same results as in that obtained by lumbar puncture. The diplococci found were thought to be gonococci. Some doubt, however, was expressed as to whether the micro-organism might not possibly be the meningococcus intracellularis of Weichselbaum. This micro-organism is generally accepted as the cause of epidemic cerebrospinal meningitis. Sporadic cases of this disease may be seen almost at any time, especially in European cities.

Cutaneous Infection.—The skin seems to be very little liable to infection by the gonococcus, yet some cutaneous and subcutaneous lesions have been noticed. Petechiæ, for instance, have been described as occurring in some cases and purpura of the lower limbs has been reported. Hematuria and even epistaxis have at times been attributed to the presence of gonococci, though usually there has been mixed infection of staphylococcus albus. In one case an indurated, red, pointed blotch occurred in the skin during the course of a series of relapses of gonorrheal arthritis.

Septic Conditions.—There is little doubt in most minds now that septic conditions can be produced by the presence of gonococci alone. In some unknown way the presence of gonococci in any part of the body seems to favor the occurrence of mixed infection. This it is that makes the definite etiology of lesions that occur during the course of gonorrhea so difficult to settle. As a rule, one should not speak of gonorrhea, but of gonococcal infection.

Gonococcal Toxins.—There is supposed to be a toxin produced by the growth of the gonococci the absorption of which causes certain of the constitutional symptoms familiar in gonorrhea. This toxin has, however, never been demonstrated and its existence is entirely hypothetical.

Avenues of Systemic Infection.—There are two ways by which the gonococci can find an entrance into the system, namely, through the blood-stream and through the lymphatic current. Spread of the gonococci through the lymphatics is well established. The occurrence of buboes in the inguinal glands is usually due to mixed infection, but in a certain number of cases a pure culture of diplococci with all the bacteriological characteristics of gonococci have been found. Often when other pus micro-organisms can be demonstrated gonococci are also present.

Generalized Infection.—Since the occurrence of gonorrheal arthritis and gonorrheal endocarditis makes it clear that gonococci can be transported by the blood-stream, the only rational conclusion is that constitutional infection by the gonococci is not so rare as it has been thought. It has been demonstrated that gonococci may occur in pure culture within the heart or in the arterial blood. It may not be said, perhaps, that it is a constitutional disease with a local manifestation, but it must be admitted that, while mainly a local disease, it is capable of producing systemic disturbances and may become generalized.

Latent Infections.—Dr. Robert H. Greene said that a much larger proportion of cases of gonorrhea than has been hitherto imagined have prostatic infections. These escape detection for the most part. Gouley found granulomatous processes in the prostate, the result evidently of chronic inflammation extending over a long time, in cases where there had been practically no symptoms of such a condition. Undoubtedly there are cases in which constitutional symptoms are noticed very early in the course of the disease. At times, too, these constitutional symptoms are noted without any serious preliminary symptoms of the disease. The primary acute stage is entirely latent and there is an insidious involvement of other parts because of infection through the lymphatics.

Influence of Soil.—Dr. Eugene Fuller said that undoubtedly gonorrhea starts as a local infection and should be considered as such. The tissues of certain individuals, however, make an especially favorable soil for the growth of the gonococcus and so the whole system may become infected. In some individuals there is very little resisting power to gonococci invasion. Many of the complications, especially those at a distance from the original focus of disease in the urethra, seem to him to be due to mixed infection. The cause of the complication is really some other micro-organism that finds a favorable opportunity for entrance through the lesions produced by the gonococcus. It has always seemed to Dr. Fuller that the gonococcus is only an incident in the serious complications and sequelæ that sometimes occur.

Lowering of Resistive Vitality.—It seems not improbable that the presence of the gonococcus and of its toxins in the system may lower resistive vitality very much. It is now well known that people stung by snakes, when they escape the acute effects of the snake poison, may die of general septicemia sometime afterward as the result of the invasion of pus micro-organisms, the snake poison having robbed them of all resisting power. Most men in the special practice of genito-urinary diseases have seen some of the cases in which the patient seemed to be robbed completely of resisting power. They are very severe cases and usually are well impressed upon the physician.

Fulminant Case.—Dr. Fuller gave the details of a typical example of these fulminant cases. The patient was a large, strong, healthy man who had an attack of gonorrhea in an early stage. In the course of attendance on business he was obliged to go West. He did this all the more readily as he did not care to explain his condition to his wife. While on the train at Pittsburg he had a severe chill and high fever de-

veloped. He became delirious and his temperature was found to be above 104° F. He was removed to a hospital. His endocardium became affected, both kidneys became involved and severe arthritis of the shoulder-joint developed. He came out of this acute attack a wreck. He has improved greatly, but there is still albumin in his urine and his shoulder is somewhat stiff.

Significance of Such Cases.—Undoubtedly such attacks shorten life. They remind one of nothing so much as the fulminant puerperal septic conditions that sometimes develop without explicable cause after delivery. They run an almost exactly similar course, they submit the patient to the same serious risks and they are apt to leave the same annoying sequelæ. The cause for the infection seems to be the predisposition produced by the lowering of resistive vitality.

Gonorrhea Local in Women.—Dr. Egbert H. Grandin said that in gynecological practice one does not see the constitutional symptoms of gonorrhea as frequently as they seem to occur in the practice of specialists in diseases of the male. The gonococcus in woman seems to spread always by continuity, most frequently from the vagina to the cervix and then to the uterus and tubes and, finally, to the ovaries, with an occasional involvement of the peritoneum; or it spreads from the urethra to the bladder and thence to the ureters and kidneys. One sees chronic gonorrhea often enough and would expect to see systemic infections, if the gonococcus were prone to produce constitutional involvement. In woman at least this does not seem to be the case very often.

More Suitable Terms.—Dr. Reynold W. Wilcox said that the question presented for discussion by Dr. Sturgis was very timely. He hoped that it would enable us to get rid of the term "gonorrheal rheumatism," since arthritis complicating gonorrhea is in no sense of the word rheumatic. It used to be said that the differential diagnosis between gonorrheal rheumatism and acute rheumatic arthritis could be made from the fact that in gonorrheal arthritis no heart complications occur. It was also said that gonorrheal rheumatism was usually mono-articular. One of the worst cases of generalized arthritis that Dr. Wilcox has ever seen was gonorrheal in origin. Nearly every joint of the spinal column was affected and, as some ankylosis ensued, the patient became distinctly kyphotic.

Second Attacks of Syphilis.—Dr. Wilcox requested permission to ask a question with regard to second attacks of syphilis. A young lawyer some eight or nine years ago was treated for syphilis. He had a typical chancre and secondary symptoms and antisyphilitic treatment was continued for about two years. He remained for over six years without a lesion of the disease. About six weeks ago he contracted a discharge that seemed to be gonorrheal in character. After a time this improved and about three weeks after exposure he developed a typical chancre. Since then he has had a general roseola together with headache, feeling of general malaise and some temperature. His symptoms all point to a second attack of syphilis. While, of course, such cases have been reported a number of times, Dr. Wilcox wished to know if they were at all frequent in ordinary genito-urinary practice.

Status of the Gonococcus.—Dr. Follen Cabot said that the bacteriological status of the gonococcus is yet not entirely settled. Very few doctors are willing to take the responsibility of deciding with assurance on the absence of gonococci when there has once been an attack of gonorrhea and the patient thinks of marriage. Even after two or three examinations the bacteriologist is apt to be non-committal in his declarations.

Cultural Differences.—Dr. Cabot said that Dr. Dora Williams has found many cultural differences even between apparently genuine forms of the gonococcus. Certain gonococci grow readily on two-per-cent. agar. Others grow poorly at first, but learn to grow well on this culture medium after having passed a number of generations on it. Certain others fail to grow at all. After transference from one batch of medium to another the gonococci are apt to grow spasmodically, sometimes they grow well, sometimes poorly, sometimes not at all. Even the most vitally active forms can not be depended on to grow with regularity. Whether such cultural characteristics in the micro-organism are sufficient to constitute types of gonococci, or are only unimportant peculiarities dependent on unessential qualities further study along this line will show definitely.

Old Time Infectious Discharges.—Dr. Cabot has recently had under his care a man who had been married for fifteen years, who absolutely denied any possibility of infection outside of the conjugal relations. About four or five days after conjugal relations a discharge began, not severe at first, but which lasted for several weeks and then yielded only to antigonorrheal treatment. In the discharge there were found diplococci resembling gonococci, but it was practically impossible to say that they were surely gonococci. We are not in a position as yet to settle such a question with absolute assurance by bacteriological methods.

Diplococci in Spinal Fluid.—Dr. R. J. Wilson said that in a recent case he found a diplococcus in the spinal fluid. This diplococcus was not unlike the meningococcus intracellularis of Weichselbaum. There was in the case a malignant endocarditis and cultures taken from the blood showed the presence of a corresponding micro-organism in the circulation. Severe arthritis developed and from the arthritic fluid microorganisms were obtained which grew on ordinary agar and ordinary bouillon. Only a few delicate colonies were obtained and these were transferred to blood serum. They were found to be composed of diplococci which stained as gonococci, but grew on ordinary agar. As a consequence it was thought at first to be a meningococcus, but later on was thought to be a gonococcus. The

cultures on agar died out and no further history could be obtained.

Diplococci and Malignant Endocarditis.—In a patient under observation two years ago, malignant endocarditis developed and lasted for five weeks. Fifteen cubic centimeters of blood were taken for culture purposes, but without result. At a second culture attempt diplococci were obtained which grew on glucose peptone. The urine was then examined and cultures taken from this fluid. Other bacteria were present, but diplococci not unlike gonococci were also obtained. Pleuritis came as a complication in this case and sixty to seventy ounces of fluid were removed. Chronic diffuse nephritis was also found to exist. The physical signs of an aneurism developed over night. A number of petechæ occurred around the point whence the blood had been taken. Purpuric spots occurred on the trunk and arms.

General Infection from Gonococci.—When Thayer made his discovery of gonococci upon the heart valves it was thought that a number of these cases would be found. This expectation has not been fulfilled. Undoubtedly the gonococci do produce a systemic infection, but it is extremely hard to find them in pure culture. One cannot make any definite conclusions, as yet, as to whether the systemic infection is as a rule due to the gonococcus alone, or to mixed infection.

Analogy with Surgical Sepsis.—Dr. Howard Lilienthal said that undoubtedly gonorrhea may become constitutional, just as acute surgical infections find their way into the system. This is not apt to occur so rapidly from gonorrhea as in the infections by more distinctly pyogenic organisms. There are distinctions, of course, in the virulence even of the frankly pyogenic microbes. Staphylococci usually produce local thrombosis of a vein and then, from the clot thus formed, find their way into the blood. This produces the metastatic condition, the basis of septicemia. Streptococci act similarly, but more virulently.

Meddling with Urethra.—Dr. Lilienthal is of the opinion that uncalled-for meddling with the urethra often proves a fertile source of the generalization of gonococcal infection. The cutting and stretching of strictures, except where it is absolutely necessary, should only be done with the greatest care. Injury may mean the production of metastases. There should be very little direct treatment of an acute gonorrhea in order to avoid even the slightest trauma of the urethra at a time when the gonococci are virulent, or when secondary infective material is present with the gonococci.

Pyemic Poisoning.—Dr. Sturgis in closing the discussion said that undoubtedly quite often during the course of a gonorrhea a pyemic poison develops which is due at times to the presence of a mixed infection and at times to a pure culture of the gonococci. There remains the question, Is there a pseudogonococcus—a double of the microbe producing ordinary gonorrhea and which has under certain conditions a special virulence? Has this organism practically the same morphology as the gonococcus, and does it resemble it so closely as to be mistaken for it, as in Fuerbringer's case? There seems at times to be toxic symptoms in patients suffering from gonorrhea that can only be attributed to the presence of ptomains in the circulation due to absorption of the products of gonococcal growth at the point of local inoculation. This theory of a special toxin would account better than any other for certain symptoms the source of which is not at present understood.

Second Attacks of Syphilis.—Dr. Sturgis is of the opinion that second attacks of syphilis are not so rare as they are sometimes thought. It is probable that reinfection took place in Dr. Wilcox's case. Dr. Sturgis has had two cases in which he felt sure that a second attack took place. In the history of these cases it is usually a noteworthy fact that the first attack is very light. Mild syphilis seems not to communicate much immunity.

Dr. Eugene Fuller said that he had seen at least two cases in which he felt sure that second attacks of syphilis had taken place. It is, however, a rare condition. Some years ago he saw an English traveler who claimed to have had a primary sore while in India and less than a year afterward another primary sore while in China. It is probable that this second sore was really nothing more than a mucous patch on the foreskin.

Epithelioma of Penis.—Dr. Hawkes presented a specimen of an epithelioma of the penis for which the whole organ had been removed. The first sign of the affection was a small nodule under the foreskin. This was hard and presented some diffuse induration. It made the foreskin non-retractile. Circumcision was recommended and performed. A similar nodule appeared afterward on the scar of the circumcision wound and later at the meatus. The inguinal glands became involved; these were removed, but their involvement proved to be only inflammatory in character. There is every reason to hope that the cure will be radical.

Dr. Grandin suggested that more careful investigation should be made as to the origin of such epitheliomata, especially as regards the possibility of infection from an epithelioma of the cervix in the patient's wife. He has seen some cases that led him to suspect this etiology of penile epitheliomata.

Very Large Prostate.—Dr. Fuller presented a very large prostate which he had removed by the suprapubic method, splitting the mucous membrane of the bladder at the trigone and shelling it out. Though this tumor was so large and the operation was done only six days ago, the patient is convalescing without incident.

Dr. Howard Lilienthal said that in removing large prostates he has found Dr. Fuller's suprapubic method very satisfactory. There is very little risk, the operation is clean and done under the eye, and the convalescence is reasonably rapid, while the results are eminently satisfactory.

BOOK REVIEWS.

PROGRESSIVE MEDICINE. A Quarterly Digest of Advanced Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., Vol., II. June, 1901. Lea Brothers & Co., Philadelphia and New York.

PROGRESSIVE MEDICINE continues to maintain the same useful characteristics which have made it an indispensable feature in the physician's library. It might be termed a series of critical digests of contemporaneous medical research. The present volume comes from four authors. Dr. W. B. Coley presents the advances made in the surgery of the abdomen, including hernia; Dr. John G. Clark, those new procedures and advances in the sphere of gynecology; the diseases of the blood and ductless glands; the hemorrhagic diseases and diseases of metabolism are splendidly handled by Dr. A. Stengel, and the subject of ophthalmology is covered in a complete and thorough manner by Dr. Edward Jackson. In Dr. Coley's article, in addition to the critical and collected résumé of the literature on abdominal surgery, particular attention has been given to the subject of the surgical treatment of malignant diseases of the intestines and rectum. The illustrative features of this section are excellent. Dr. Clark has given an excellent review of his own investigations on the ovary in the section devoted to gynecology.

We know of no publication in the English language that fulfils the objects so well as this. As a suggestion to the publishers, we believe that in the index, it would be an excellent feature to refer to previous volumes in which the last résumé of the subject was treated. In this manner the student can easily refer back, without loss of time. The absence of this system of back referencing, and the time lost by the reader in trying to find his subject are factors which, with increase in the number of volumes, deter many from starting a system of this type.

ATLAS AND EPITOME OF LABOR AND OPERATIVE OBSTETRICS. By DR. OSKAR SCHAEFFER, Privat Docent in Obstetrics and Gynecology in the University of Heidelberg. Authorized Translation from the Fifth Revised German Edition. Edited by J. CLIFTON EDGAR, A.M., M.D., Professor of Obstetrics and Clinical Midwifery in the Cornell University Medical College. W. B. Saunders & Co., Philadelphia and London.

WHAT has been said of the preceding volume can only be repeated in regard to this. Since there is no branch of medicine in which demonstration is so difficult as midwifery, a series of excellent plates such as abound in this book are next to actual bedside and amphitheater instruction, an absolute necessity to the student, especially since the criticism may be made that the usual text-books are too verbose and lacking in suitable illustrations. The plates in the first part of the work picture admirably the various presentations and positions during the different stages of labor, while in the second part the different operative procedures are clearly shown.

THE RETROSPECT OF MEDICINE. A Half-Yearly Journal Containing a Retrospective View of Every Discovery and Practical Improvement in the Medical Sciences. Edited by JAMES BRAITHWAITE, M.D. Consulting Obstetric Physician and Surgeon to the Leeds General Infirmary; Late Lecturer on Diseases of Women and Children, Leeds School of Medicine, etc., and E. F. TREVELYAN, M.D., B.Sc., F. R. C. P., Assistant Physician to the Leeds General Infirmary; Professor of Pathology, Yorkshire College, Leeds. Vol. 123, January to June, 1901. Simpkin, Marshall, Hamilton, Kent and Co., Limited, London.

DURING the greater part of its sixty-two years of publication, Braithwaite's retrospect has been the source from which the British and American practitioners have drawn their information of what was being done in fields of medical science. But nowadays, the medical weeklies and monthlies provide the abstracts for which the "Retrospect" has been noted; so the editor, feeling that there is no longer need for his book, will publish no further volumes. The present issue contains, as usual, abstracts of a well-selected series of articles from British, American and continental journals. These are grouped under the headings of nervous system, digestive organs, etc. The book is of handy size so that it may be carried about, and is replete with articles of interest to the medical man. We cannot but feel regret that its publication is to cease.

A PRACTICAL TREATISE ON DISEASES OF THE SKIN FOR THE USE OF STUDENTS AND PRACTITIONERS. By JAMES NEVINS HYDE, A.M., M.D., Professor of Skin, Genito-Urinary and Venereal Diseases, Rush Medical College, Chicago, etc., and FRANK HUGH MONTGOMERY, M.D., Associate Professor of Skin, Genito-Urinary and Venereal Diseases in Rush Medical College, Chicago, etc. Sixth and Revised Edition. Lea Brothers & Co., Philadelphia and New York.

THE fact that one year has sufficed to exhaust a larger edition than was ever before published led to a thorough revision by the author and speaks well for the increasing favor in which their work is held. Following chapters on the Anatomy and Physiology of the Skin, General Symptomatology, Etiology, etc, the various diseases are discussed, the classification of Hebra being still adhered to as most practical for the student, though not sufficiently scientific for the expert. Among the diseases which have been rewritten are acne, herpes, psoriasis, scleroderma, tuberculosis, blastomycosis and carates, and the discussions on pathology have been brought up to the present day. The illustrations, printing and binding also deserve most favorable mention and we wish the book further well-deserved success.